1,000 QUESTIONS

IN

ARITHMETIC, GRAMMAR, GEOGRAPHY,
GEOMETRY, HISTORY, SPELLING,
AND DRAWING.

AN AID IN PREPARING PUPILS FOR

COLLEGE, HIGH SCHOOL, WEST POINT, ANNAPOLIS,
REGENTS' EXAMINATION, AND THE
CIVIL SERVICE.

FOREWORD.

THE following questions have formed the test for admission to the College of the City of New York and the Normal College, New York, during the past five years. A diligent use of them will undoubtedly improve the chances of future candidates. They will serve equally well in preparing for institutions short of the universities.

New papers will be added from year to year.

The interleaving will be an appreciated convenience in making notes.

A *key* to the questions will be issued about March 1st, 1893, at one (1) dollar per copy.

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ARITHMETIC.

College of the City of New York, June, 1888.

Time, $1\frac{1}{2}$ hours.

Write on but one side of the paper and do not write anything in the margin, not even the numbers of the answers.

Separate the answers to the different questions by horizontal lines drawn across the whole sheet.

Do not copy the questions, but number each answer and mark each subdivision of the answer with the same letter (*a*), (*b*), or (*c*), etc., used in the questions.

Leave *all* the work upon the paper, not the results merely. Let each calculation appear in full.

In working the last four examples, *the reasons for each step must be indicated.*

See that your number is written at the top of each sheet, in the middle, and that each page is numbered at the upper right-hand corner.

1. (*a*) When is a common fraction said to be in its lowest terms?

(*b*) When are four numbers said to form a proportion?

(*c*) What is meant by the present worth of a sum of money due six months hence?

(*d*) What is a minuend? a subtrahend? a quotient?

2. (*a*) Reduce to its simplest form the following expression:

$$\frac{\frac{3}{4} \text{ of } 2\frac{1}{4} \text{ of } \frac{2}{3}}{\frac{3}{7} \text{ of } 3\frac{1}{2}} \times \frac{\frac{2}{3}}{\frac{2}{9}} \div 4\frac{1}{2}$$

(*b*) Add together (using the least Common Dividend) $\frac{3}{4}, \frac{4}{9}, \frac{1}{2}, \frac{5}{6}$.

(*c*) Divide $1\frac{2}{3}$ by $\dfrac{\frac{2}{3}}{\frac{2}{15}}$

3. (*a*) What is the effect of multiplying the denominator of a fraction by a whole number?

(*b*) Explain the reason of this.

4. (*a*) Write in decimal form:

Forty hundred thousandths.

Nine hundred and twenty-four millionths.

Two thousand, one hundred and twelve thousandths.

(*b*) Divide 5.6 by .00014.

(*c*) Reduce $\frac{3}{120}$ to a decimal.

5. (*a*) Add the following decimals: 3.123, .00004, 200.1.

(*b*) Subtract 2.0046 from 3.3.

(*c*) Multiply 1.001 by 33.004.

(*d*) What denominator is always understood with every decimal fraction?

6. (*a*) What is the effect upon the value of a decimal fraction of moving the decimal point one place to the right?

(*b*) Explain the reason of this.

7. If it costs $100 to carpet a room 24 feet long and 21 feet wide with carpet of a certain quality, how much will it cost to carpet a room which is 31 feet 6 inches long, and 18 feet wide, with carpet worth 20% more per yard?

8. A dealer bought in the country 500 bushels of potatoes for 50 cents a bushel and shipped them to New York for sale. The freight was $2\frac{1}{2}$ cents per bushel; cartage in New York on the whole was $7.50, and one-tenth of them were damaged on the way so as to be unsalable. At what price per bushel must he sell the remainder so as neither to make nor lose on the transaction?

9. A man spends 25% of his capital for a house, puts 60% of the remainder into his business, and invests the rest in bonds bearing 6% interest. From these bonds he receives an income of $1,200 per annum. What is his entire capital?

10. A, B, and C can together do a piece of work in 3 days. A alone can do it in 12 days; and B alone can do it in 6 days. In how many days can C alone do it?

College of the City of New York, 1889.

Time, $1\frac{1}{2}$ hours.

1. (*a*) Define a common fraction;

(*b*) A compound fraction;

(*c*) A decimal fraction.

(*d*) Give the rule for the multiplication of one decimal fraction by another.

(*e*) What is discount?

2. (*a*) Add the following fractions: $\frac{3}{4}$ of $\frac{5}{6}$ of $\frac{3}{10}, \frac{\frac{4}{5}}{\frac{7}{10}}, \frac{3}{8}$.

(*b*) Find the value of the following: $\frac{2\frac{1}{4}}{3} - \frac{1}{2}$ of $\frac{3}{8} - \frac{1\frac{1}{2} \times \frac{7}{3}}{\frac{7}{4} \text{ of } 1\frac{6}{5}}$.

3. (*a*) Write in a decimal form: $\frac{3}{10000}$. $\frac{4}{100}$. $\frac{516}{100}$.

(*b*) How do you most easily multiply a decimal by 10 ?

(*c*) Divide 16. by 4.; by 400.; by .004

(*d*) Multiply 41 by .0006

4. In multiplying $\frac{3}{4}$ by $\frac{5}{3}$ explain why cancelling the 3 in the numerator and denominator will give a correct result.

5. Divide 3.25 by .5 and explain the reason of the rule for pointing off the decimal places in the quotient.

6. What sum of money put at interest for 2 years·9 months and 9 days, at 6% per annum, will produce $2,951.80 ?

7. A certain cistern can be filled by one pipe in 10 hours, by another in 6 hours, and can be emptied by a third in 5 hours.   In how many hours can it be filled if all three pipes are opened at once ?

8. An importer bought in France 1,000 pieces of a certain goods at $40 per piece.   The duty paid on importing the goods was 50% of the cost, and the freight and other charges were in all $1,500.   For how much per piece must he sell the goods so as to make 20% ?

9. Two men start from two towns 105 miles apart and walk toward each other.   They meet at the end of 15 hours.   The first has travelled 3 miles per hour.   At what rate has the second travelled ?

10. If 10 men working 8 hours per day can build a certain wall in 6 days, how many hours a day must 12 men work to build the same wall in 4 days ?

College of the City of New York, 1890.

1. (*a*) What is a common fraction ?

(*b*) What is a decimal fraction ?

(*c*) What is ratio ?

(*d*) When are four numbers said to be in proportion ?

2. (*a*) Divide $1\frac{2}{3}$ by $\dfrac{\frac{5}{7}}{3}$.

(*b*) Reduce the following fractions to equivalent fractions having their least common denominator:

$$\tfrac{3}{10}, \ \tfrac{3}{8} \text{ of } \tfrac{7}{3} \text{ of } \dfrac{2\frac{2}{7}}{3}, \ \tfrac{2}{3} \text{ of } \tfrac{3}{5}.$$

(*c*) Add together the results obtained in (*b*).

3. (*a*) What fraction of $\frac{5}{7}$ is $\frac{1}{2}$?

(*b*) Find the value of $\frac{1}{14}$ of a mile in rods, yards, feet, and inches.

(*c*) Reduce $\frac{5}{80}$ to a decimal fraction.

4. What is the effect of dividing the denominator of a given common fraction by 4? Explain the reason of this.

5. (*a*) Write in decimal form the following:

Ten and ten hundredths; nine millionths; thirty thousandths; thirteen hundred and forty-two hundredths.

(*b*) Add .003, 1.25, 20006.

(*c*) Divide .048 by 1600.

6. (*a*) Multiply .26 by .0035.

(*b*) Divide .006 by 10 by the shortest method.

(*c*) Explain the reason of this method.

7. If 4 men working 8 hours per day can mow a meadow in 3 days, how many men working 9 hours per day can mow a meadow three times as large in 4 days?

8. A, B, and C entered into partnership for one year. A put in $5,000, B $6,000, and C $4,000. At the end of 6 months A withdrew $2,000 and C put in $8,000 more. The profits at the end of the year were $6,000. What was each man's share?

9. A bought merchandise from B for $10,000 and gave his note for 6 months, without grace, with interest at 6%. Just when the note was due he sold the goods to C for $12,000, taking C's note at 3 months without interest, which his bank discounted for him the same day. After paying his note to B, how much money had he remaining?

10. A drover bought a drove of 50 cattle for $2,000. He

sold $\frac{1}{5}$ of them at a gain of 10% on the average price, and $\frac{1}{5}$ of them at a gain of 15%. Half of the remainder, however, were so injured in a railroad accident that he could only obtain $100 for them. For what price apiece must he sell the rest so that his total loss shall be $100 ?

College of the City of New York, 1891.

Time, $1\frac{1}{2}$ hours.

1. (*a*) What is meant by the ratio of one quantity to another ?

(*b*) What is meant by the Greatest Common Divisor of several numbers ? Give an example.

(*c*) What is meant by a minuend ? by a quotient ?

(*d*) When is a common fraction said to be in its lowest terms ?

2. (*a*) Reduce to its simplest form the following expression :

$$2\tfrac{1}{4} \times \tfrac{4}{7} \times \frac{2\frac{1}{2}}{\frac{3}{8}} \text{ of } 1\tfrac{4}{15}.$$

(*b*) Find the value of the following : $\frac{3}{4} + \frac{2}{3} - \frac{3}{8} + \frac{5}{6}$.

(*c*) Reduce $\frac{15}{24}$ to a decimal fraction.

3. (*a*) Find the value of $\frac{3}{440}$ of a mile in the lower denominations.

(*b*) What is the effect upon the value of a fraction if we multiply the denominator by three ?

(*c*) Explain the reason of the last answer.

4. (*a*) Write in decimal form the following:

Ten ten-thousandths.

One thousand and twenty-four ten-millionths.

Thirty-two and four thousandths.

(*b*) Multiply .0036 by 1.02.

(*c*) Divide 2.56 by .0016.

5. (*a*) If a cipher is added at the right of the decimal what effect has this on the value of the decimal ?

(*b*) Explain the reason of this.

6. (*a*) What part of $\frac{2}{3}$ is $\frac{2}{7}$?

(*b*) What is the easiest method of multiplying a decimal by 10 ?

(*c*) Reduce 20 square rods to the decimal of an acre.

7. If by selling a house for $12,600 a builder gains $12\frac{1}{2}\%$, what per cent would he have lost by selling it for $8,400 ?

8. A, B, and C began a partnership on January 1st. A put in $10,000; B, $6,000; and C, $3,000. At the end of 6 months B put in $4,000 more, but A withdrew $2,000. At the end of the year they had on hand $18,000 in cash and goods valued at $12,000. At this time the property was divided and the firm dissolved, A taking all the goods as part of his share. How much *cash* did each of the three receive ?

9. A traveller going from one town to another walks $\frac{1}{5}$ of the distance on his first day's journey, $\frac{1}{4}$ of the remainder on the second day, 20 miles on the third day, and finds he has $\frac{4}{10}$ of the distance still to go. What is the distance ?

10. A dealer bought 1,200 barrels of flour at $6 per barrel and shipped them to New York by railroad. An accident on the road destroyed $\frac{1}{3}$ of them. He sold the remainder at $7.50 per barrel. His freight and cartage were $312. He sued the railroad company and recovered some damages, but his legal expenses were $350. At the close of the transaction he found he had made, over all expenses, just $138. How much did he receive from the railroad company ?

College of the City of New York, 1892.

Time, $1\frac{1}{2}$ hours.

1. (*a*) What is meant by a decimal fraction ?

(*b*) Define a minuend; a multiplicand; a quotient.

(*c*) In every common fraction what is shown by the denominator ? What by the numerator ?

2. (*a*) Reduce to its simplest form the following expression:

$$\frac{3\frac{1}{4}}{4\frac{1}{3}} \text{ of } \frac{12}{7} \times \frac{7}{3}.$$
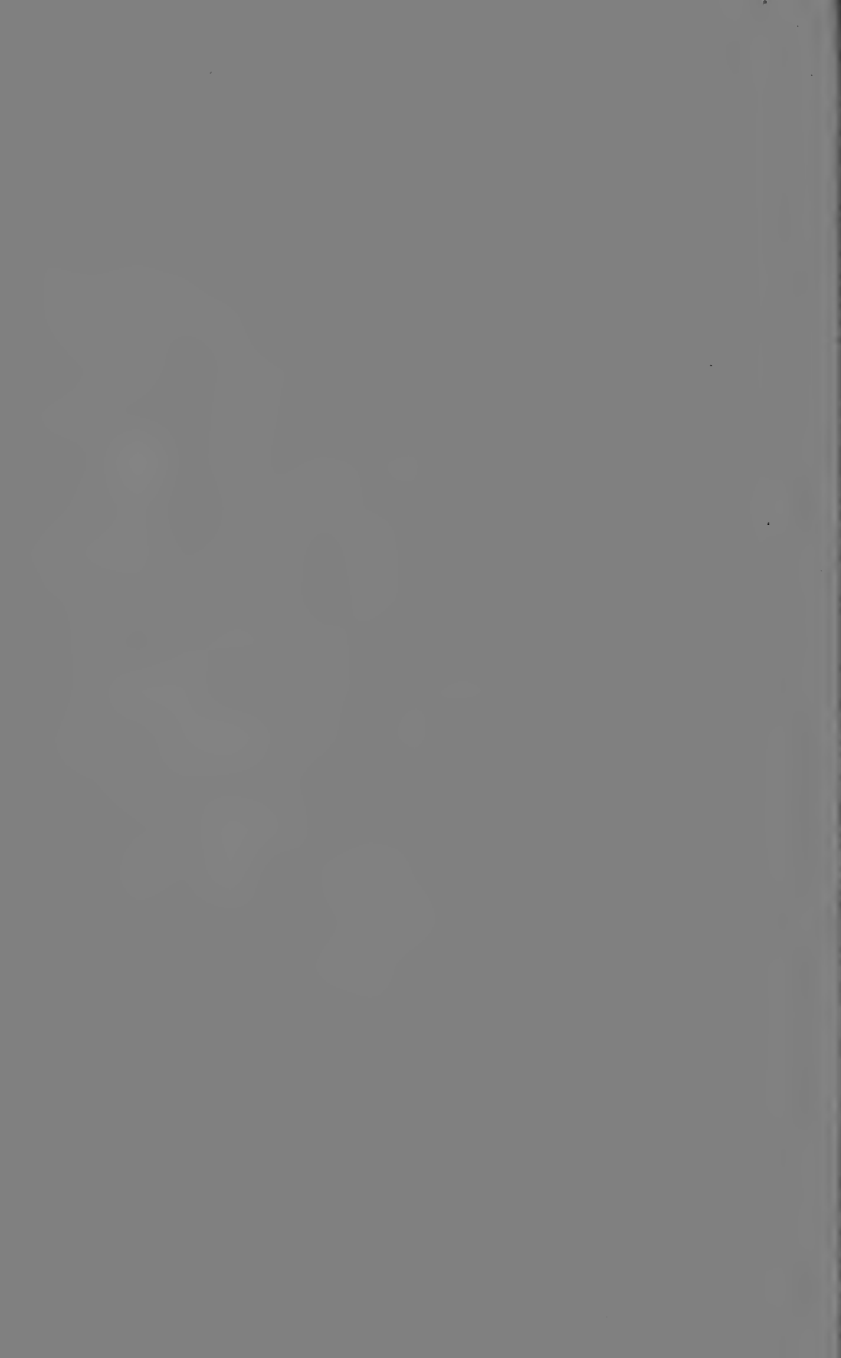
(*b*) Reduce the following fractions to their *least* common denominator: $\frac{3}{4}, \frac{2}{9}, \frac{2}{3}$ of $\frac{15}{16}$.

(*c*) Find the value of $\frac{1}{4}$ of $\frac{3}{8} + \frac{1}{3} - \frac{1}{12}$.

3. (*a*) What part of $\frac{3}{8}$ is $\frac{2}{7}$?

(*b*) Reduce $\frac{3}{800}$ to a decimal fraction.

(*c*) Multiply .05 by 3.2.

4. (*a*) If the numerator of a common fraction is divided by 3, what is the effect upon the value of the fraction?

(*b*) If the denominator is divided by 3, what is the effect upon the value of the fraction?

(*c*) Explain the reason of this last result.

5. (*a*) Write in decimal form: Ninety millionths; thirty ten thousandths; ten, and twenty-five thousandths.

(*b*) Divide .064 by .000016.

(*c*) Add .003, 12.06, 1.1.

(*d*) Subtract 2.3 from 4.006.

6. (*a*) What is the effect on the value of a decimal of moving the decimal point two places to the right?

(*b*) Explain the reason of this.

(*c*) In multiplication of two decimals how many decimal places are to be pointed off in the product?

(*d*) Explain the reason of this rule.

7. How much is $5\frac{4}{5}$ tons of coal worth, if $17\frac{2}{5}$ tons are worth $100?

8. A person expended 16% of all he was worth in buying 20% of the stock of a Mining Company. If the entire stock of the company sold for $160,000, what must the person have been worth?

9. Four men undertook to do a piece of work in 18 days and worked at it 6 hours a day for 10 days, when they found they had finished only $\frac{1}{3}$ of it. How many *more* men did they have to engage in order to finish the job by the time agreed upon, provided they all worked thereafter for 10 hours each day?

10. A provision merchant bought 100 barrels of apples at a farm-house at $1 per barrel, and paid 5 cents per barrel to

have them taken to the railroad station. Then he paid $50 freight on them to New York and $20 cartage in the city. They were sold at once for $3 per barrel, but the commission merchant charged him 10% commission on the sale. Also when some of the barrels were opened the apples were found to be damaged and he had to repay the purchasers $20 on account of this. How much did he gain in all?

Normal College, 1888.

1. Define quantity, number, figure. Explain the difference between number and figure. Explain briefly the Roman method of notation. Write the present year in Roman characters. What is a common fraction? Upon what does the value of a fraction depend? Why are fractions reduced to a common denominator before they can be added?

2. A man has $20\frac{3}{4}$ acres in one field, $40\frac{4}{7}$ acres in another, and $\frac{2}{3}$ as many acres in a third as in the other two; how many has he altogether?

3. What is ratio? What is proportion? Why must the first and second terms of a proportion be of the same name or kind?

It requires $\frac{1}{8}$ of a bushel of oats to keep 4 horses $\frac{1}{3}$ of a day; how many horses will 9 bushels feed $\frac{3}{5}$ of a day?

4. What is per cent? Write decimally $\frac{1}{3}$ of 1%.

Bought apples at $\frac{1}{5}$ of a cent each and sold them at $\frac{1}{2}$ of a cent each; required the gain per cent.

5. What is the face of a note at 90 days, the proceeds of which, discounted at a bank at 6%, are $2,000?

6. A man bought a house, agreeing to pay $\frac{1}{2}$ in 4 months, $\frac{1}{3}$ in 9 months, and the remainder in a year. Find the average time of credit.

7. Sold $460 uncurrent money at $\frac{4}{5}$% discount. Find the discount and market value.

8. What principal will in 3 three years, 8 months, 15 days, at 6%, give 76.09\frac{1}{2}$ interest?

Normal College, June, 1889.

Time, 2 hours.

1. Express as a decimal $\frac{2}{3} \times \frac{\frac{3}{4} - (\frac{1}{5} \times \frac{10}{6})}{3\frac{1}{3} - 2\frac{5}{6}}$.

2. A can do a piece of work in $\frac{5}{6}$ of an hour; B can do $\frac{5}{6}$ of it in one hour. In what time can both do it?

3. What is the difference between the interest and the time discount of $576 due 16 months hence at 6%?

4. What decimal of 7 bu. 1 pk. 5 qt. is 82 bu. 3 pk. 1 qt.?

5. How much can be realized yearly from an investment of $6,900 in a $4\frac{1}{2}$% stock, bought at 86, brokerage $\frac{1}{4}$%?

6. The interest on a note for 2 y. 6 mo. at 7% was $118.23. What was the face of the note?

7. Bought the following bills on 4 months: September 9th, 1880, $140; October 9th, $160; November 6th, $200. What is the average time of payment?

8. A merchant sold goods for $150 and lost 10%, whereas he should have gained 30%. How much were they sold under their proper value?

9. If 25 men working 8 hours a day do $\frac{2}{3}$ of a piece of work in 24 days, in how many days of 10 hours each will 30 men finish the piece of work?

10. In what time will $12,000 yield $2,500 at $4\frac{1}{2}$%?

Normal College, 1890.

1. When is a fraction said to be written in the vulgar form? In the decimal form? Write seven thousandths in both forms. Express $133\frac{1}{3}$% decimally; also as a vulgar fraction without reduction and as a vulgar fraction reduced to its lowest terms. State two ways of making a fraction smaller.

2. Find the result of the following operations:

$$60 - .012 + (\tfrac{4}{5} - \tfrac{3}{4}) \; .008.$$

3. A sold B goods for $394 at a loss of 1½%. B sold them to C at a profit of 1½%. Did they cost C more or less than A, and how much?

4. All my money is invested at 7% and my annual income is $1,735. How much money have I?

5. A merchant bought velvet at $5 a yard; how much must he ask for it that he may make a discount of 10% from his asking price and still realize a profit of 15%?

6. How much income annually will be obtained by investing $8,010 in 6% bonds selling at 89?

7. The interest of $500 at 6% for a certain time is $60; what principal will yield $75 interest in half the time at 8%?

8. What is the cost of 2 tons, 15 cwt., 2 qr., 15 lbs. of hay at $21.50 a ton? also at $1.12 a cwt.?

Normal College, 1891.

1. Define the following terms employed in arithmetic: *Quantity, number, abstract number, multiplication, proportion.*

Explain the reason for multiplying the second and third terms together and dividing by the first term in solving an example in simple proportion.

2. $\dfrac{\tfrac{2}{3} \text{ of } \tfrac{11}{12}}{\tfrac{1}{81} \text{ of } 5\tfrac{1}{2}}$ is what part of $\dfrac{\tfrac{2}{3} \text{ of } 3\tfrac{2}{3}}{\tfrac{1}{6} \text{ of } 5\tfrac{1}{2}}$?

3. Columbus is 83° 3′ west longitude, and when it is 37 min. 33 sec. past 1 P.M. it is 11 o'clock A.M. in San Francisco. What is the longitude of the latter city?

4. Divide thirty-two hundred-millionths by sixty-four ten-thousandths.

5. A, B, and C gained by speculation $11,480, of which A's share was twice as much as C's, and B's five times as much as C's. How much did each gain?

6. A man owes $600, of which one-third is to be paid in one year and the remainder in two years. What is the present value, money worth 6% ?

7. I bought a watch for $120 and set such a price on it that after falling $12 I still made 15% on the purchase. What per cent did I abate from the asking price ?

8. A pole was broken 52 feet from the bottom and fell so that the end struck 39 feet from the foot. Required the length of the pole.

9. Extract the cube root of $\frac{243}{24}$ to five places of decimals.

10. Sold a horse so that $\frac{4}{5}$ of the gain equalled $\frac{2}{15}$ of the cost. What was the gain per cent ?

Normal College, 1892.

Time, 2 hours.

1. (a) Define prime number.

(b) When is one number said to be prime to another ?

(c) Define the least common multiple and the greatest common divisor of a number.

(d) Define commercial or bank discount.

2. Simplify $\dfrac{1\frac{7}{8} - 5\frac{1}{4} \times \frac{4}{13} - \frac{3}{16}}{\frac{4}{3} + \frac{1}{2} - 1\frac{3}{14}}$.

3. Simplify $\dfrac{.321 \times .321 - .179 \times .179}{.321 - .179}$ of 5.

4. Divide 3,432 into 3 parts proportional to 3, 4, and 5.

5. At 3 cents a pound how many tons of iron can be bought for $396.18 ?

6. If 50 men can build 50 rods of wall in 75 days, how many men will be required to build 80 rods of wall $\frac{2}{3}$ as thick and $\frac{4}{5}$ as high in 40 days ?

7. A lawyer having a debt of $1,536 to collect, compromises for 95%. What is his commission at $4\frac{1}{2}$% and what does he remit to his employer ?

8. A broker bought for me 76 shares of bank stock (par

value of each share $50) at 47½.   What did the stock cost
me, the brokerage being ¼% ?

9. Two vessels sailed from the same port, one sails north
3 miles an hour, the other west 4 miles an hour.   How
far are they apart in two days ?

10. Extract the cube root of 633839.779.

ENGLISH.

College of the City of New York, May, 1888.

1. Use each of the following words in a separate sentence, showing the correct use of the word:

(*a*) Betrayed; (*b*) apparent; (*c*) faltering; (*d*) sympathy; (*e*) anonymous.

2. (*a*) What is a participle? Give an example of an imperfect participle.

(*b*) What is the comparative degree of adjectives? Give the comparative of "*ill.*"

(*c*) What are modes, or moods? What mood is employed in the example "*if he were*"?

(*d*) How do intransitive and passive verbs differ? Make a sentence of at least ten words, using an intransitive verb as the predicate.

(*e*) State the difference between an interrogative and a relative pronoun. Construct a sentence showing the use of both pronouns.

3. Construct a compound sentence of not less than twenty words, one of the clauses of which shall be complex.

4. Construct a complex sentence of not less than fifteen words, with an infinitive phrase as the subject.

5. Analyze the following:

"Trust no Future, howe'er pleasant!.
    Let the dead Past bury its dead!"

6. Analyze the following:

"In the middle of the night, and under all the rest of our distresses, one of the men, that had been down on purpose to see, cried out we had sprung a leak."

7. The following examples, showing the careless use of language in advertisements, are from an article in *Chambers' Journal.* You are required to correct the errors and give a short reason for the corrections.

2

(*a*) A shop in Cheapside warns everybody against un-scrupulous persons " who infringe our title to deceive the public."

(*b*) The proprietor of an eating-house near the docks has on his door a notice to the gallant tars who frequent the port: " Sailors' vitals cooked here."

(*c*) A boarding-house keeper announces in one of the papers that " he has a cottage to let containing eight rooms and an acre of land."

(*d*) A dealer in cheap shoes makes this announcement: " Ladies wishing these cheap shoes will do well to call soon as they will not last long."

(*e*) The same carelessness appears in the following: " This hotel will be kept open by a widow of the former landlady who died last summer on a new and improved plan."

8. Write a short letter, the body of which shall not be less than twelve lines in length, properly dated, addressed to your uncle, and signed Thomas Gilbert; announcing that your father is about to sail for Europe; mentioning the length of time he is likely to be absent and the countries he intends to visit, and adding such other particulars as would be proper in a letter of this sort.

College of the City of New York, 1889.

Analyze the following sentences, 1 and 2. If the candidate prefers to diagram one or both of them he may do so.

1. " In the Acadian land, on the shores of the basin of Minas
   Distant, secluded, still, the little village of Grand Pré
   Lay in the fruitful valley."

2. "Alas! the meanest herb that scents the gale,
   The lowliest flower that blossoms in the vale
   Even where it dies, at Spring's sweet call renews
   To second life its odors and its hues."

3. (*a*) What is a sentence ? Name the different kinds of sentences.

(*b*) What is a phrase ? Name the different kinds of phrases.

(*c*) What is the difference between a phrase and a clause ?

(*d*) What is the difference between a compound and a complex sentence ?

4. Correct the errors in the following examples, *a, b, c,* and *d,* being particular to give in each case the reason for the correction; and answer the inquiry in *e.*

(*a*) " Who is there ?   It is me."

(*b*) " If you had been working all morning like we have you would be glad to rest."

(*c*) " You can't deny but what you received notice."

(*d*) " If any pupil has seen the lost book, I shall be glad if they will let me know."

(*e*) " If he were here, he would answer for himself."
     Why is *were* used after *he ?*

5. (*a*) In what ways is the plural of nouns formed ? Give an example of each.

(*b*) Give the feminine of the following nouns: Bachelor, Boy, Drake, Earl, Gander, Ram, Hart, Wizard.

(*c*) What is meant by a part of speech ? What is inflection in grammar ?

(*d*) What part of speech undergoes the most change by inflection ? Give the singular and plural of one example.

(*e*) What are the two simple rules for the use of the auxiliaries *shall* and *will ?*

College of the City of New York, 1890.

1. Give the plural of court-martial, genus, spoonful; the feminine of abbot, hero; the superlative of ill, much, forth, far; the past participle of begin, shake, drive, cleave, swim.

Change the following nouns into adjectives by means of suffixes: Gold, truth, boy, love, virtue, question.

2. State the class, mood, and tense of the verbs in the following sentences:

The dream was fled.

The Lord judge between thee and me.

I shall not look upon his like again.

Many acts that had been otherwise blamable were done by him.

3. Analyze the following sentences:

(a) Epictetus says: "Every matter has two handles, one of which will bear taking hold of, the other not."

(b) Art thou not content that thou hast done something conformable to thy nature, and dost thou seek to be paid for it, just as if the eye demanded a recompense for seeing?

4. Correct the errors in the following sentences:

I expect it rained here yesterday.

The soil is adapted for wheat and corn.

We sorrow not as them that have no hope.

She is fairer, but not so amiable, as her sister.

No one ever sustained such mortifications as I have done to-day.

5. Write a simple sentence containing a participial and an infinitive phrase.

Write a compound sentence having two co-ordinate members, one of which shall be simple and the other complex.

College of the City of New York, 1891.

1. Correct the errors in the following sentences and give the reason in each case for the correction:

(a) You cannot expect for a long time to write like he did.

(b) We were talking about our old friend who had sent me a flattering message, and I wondered did he mean it.

(c) Everybody nowadays publishes memoirs; everybody has recollections which they think worthy of recording.

(*d*) Let there be but matter and opportunity offered and you shall see them quickly to revive again.

(*e*) The being abandoned by our friends is very deplorable.

2. Analyze the following sentence:

> "High on a throne of royal state, that far
> Outshone the wealth of Ormus and of Ind,
> Or where the gorgeous east with richest hand
> Showers on her kings Barbaric pearl and gold,
> Satan exalted sat, by merit raised
> To that bad eminence."

3. In how many and what ways do we denote comparison of adjectives ? Give an example of each.

4. Give the principal parts of the following verbs. If there are two forms of any principal part give both:

Dive, Bereave, Cleave (*to split*), Swim, Abide, Thrive, Read, Quit, Swing, Breed.

5. Give the general rule for the correct use of "shall" and "will."

6. Write a letter to *James B. Murray*, asking a situation as clerk, stating your fitness for the place by education, age, and any other qualification you deem important. Sign the letter with the name *George Thomson* and be careful not to sign it with your own name.

College of the City of New York, 1892.

1. We frequently hear it said: "*That is bad grammar.*" Explain what is meant by "bad grammar."

2. Why is it considered wrong to say (*a*) "*most perfect,*" (*b*) "*most circular,*" (*c*) "*supremest,*" (*d*) "*chiefest,*" (*e*) "*most infinite*" ?

3. Correct the errors in the following sentences and give a reason or rule for each correction:

(*a*) That awkward country boy learns faster than us all.

(*b*) There is nothing to prevent him going.

(*c*) My mother gave me three tea-spoonsful of the medicine.

(*d*) I asked the carpenter to lend me his two feet rule.

(*e*) His teacher learns her boys better than our teacher learns us.

(*f*) I called but you was not at home.

(*g*) I says to him: " Run away as fast you can."

(*h*) I will try and catch the horse.

(*i*) The next New Year's day I shall be at school three years.

(*j*) I know that he cannot do this like I did it.

4. What are tenses and moods in Grammar? Give the first person plural of the tenses in the different moods of the active verb " strike."

5. Why do we use pronouns? Show the advantage gained by the use of " he " and " which " in constructing one sentence out of the following:

" Cæsar crossed the Rubicon. The Rubicon is a river not far from Rome. Cæsar found no opposition on entering Rome."

N. B.—Substitute another word for the second " Rome."

6. Construct a sentence about George Washington (*a*) with an object clause; (*b*) also one with a subject clause; (*c*) also one with a subject infinitive phrase. Underline each clause and the phrase.

7. Turn this poetry into prose.

(*a*) " My heart leaps up when I behold

(*b*)   A rainbow in the sky;

(*c*) So was it when my life began,

(*d*) So is it now I am a man,

(*e*) So be it when I shall grow old,

(*f*)   Or let me die!"

8. In the foregoing selection parse the word " *when* " in line (*a*); the word " *was* " in line (*c*); the word " *be* " in line (*e*); and the words " *let* " and " *die* " in line (*f*).

9. Analyze the following sentence:

" The bliss of man,—could man that blessing find—
Is not to act or think beyond mankind."

10. Write a composition of not less than 75 words in length on one of the following subjects:

    (*a*) "The Chicago Fair."

    (*b*) "Is a cable-road better than a horse-railroad?"

    (*c*) "Why is rapid transit desirable?"

    (*d*) "Describe Riverside Drive."

    (*e*) "Describe the Brooklyn Bridge."

    (*f*) "Why do I (you) seek admission to college?"

Notice that the punctuation, capitals, grammar, and good sense of your composition will be carefully criticised, and be careful to write the composition on a separate sheet.

Normal College, June, 1888.

1. Name the different kinds of pronouns.   Write a sentence to illustrate each kind.

Write a sentence with the word *what* used as an adjective.

Correct "Men and Boys Clothing."

2. What is a compound sentence?   Write an example. Write a complex sentence.   Show the difference between a compound and a complex sentence.   Write a compound sentence with four co-ordinate clauses.

3. Write a sentence containing the word *order* as a noun and as a verb.   Give an illustration of a descriptive adjective used as a noun; of a numeral adjective used as a noun.

Construct a sentence with a verb in the active voice and change it into the passive voice without altering the meaning.

4. "At the first stage of his journey, a trial of his tenderest feelings awaited him in a public dinner given him at Alexandria, by his neighbors and personal friends, among whom he had lived in the constant interchange of kind offices, and who were so well aware of the practical beneficence of his private character."— *Washington Irving.*

Analyze the above sentence very briefly.   Tell the kind of sentence.   Write out and number each clause and give the modifiers of *had lived.*

5. Parse *given, him* (after given), *had lived, aware,* and *so.*

Normal College, 1889.

Time, 1½ hours.

I am the besom that must sweep the court clean of such filth as thou art. Thou *hast* most traitorously *corrupted* the *youth* of the realm in erecting a grammar school. It will be proved to thy face that thou hast men about thee that usually talk of a noun and a verb, and such abominable words as no Christian ear can endure to hear.   *Henry VI.*

1. What kind of a sentence is the first sentence?

2. What kind of a sentence is the second sentence?

3. What kind of a sentence is the third sentence?

4. In the first sentence write the kind of clauses according to the divisions known as noun, adjective, and adverbial.

5. In the third sentence write the kind of clauses according to the divisions known as noun, adjective, and adverbial.

6. Define *clause* and *phrase*.

7. Parse the following words: *Besom, that* (1), *must, sweep, clean, grammar-school, in, that* (2), *that* (3), *such*.

8. Write the potential mood, past perfect (pluperfect) tense of the verb to *write*.

9. What is a passive verb? How is it formed? Write a compound sentence of three clauses containing the passive voice of the verbs *love, esteem, reverence*.

10. Construct a complex sentence with two adverbial and one adjective clause.

Normal College, 1889.   (2d paper.)

Time, 1½ hours.

1. Write a letter of application for a position as teacher in the ward in which you live.

[Credit will be given for *arrangement*, for *correctness* of language, for *punctuation*, for the right use of *capitals*, and for *orthography*.]

2. Define *garrison, instigate, repentance, remorse, hallow*, and use each word in a separate sentence.

3. Punctuate and capitalize the following:

Trav   my lord sir john umfrevile turned me back
With joyful Tidings and Being better Horsed
out rode me after him came spurring hard
a Gentleman almost forspent with speed
That stopped by me to breathe his Bloodied Horse
he asked the way to chester and of him
I did demand what news from shrewsbury
he told me that Rebellion had ill luck
And that Young Harry Percy's spur was cold.

4. Convert the following into simple sentences:

"When I had done this I returned."

"I came that I might assist you."

Correct the following and give reason:

"The reveries of a batchelor" were written by D. G. Mitchell.

Normal College, 1890.

1. What is a part of speech? Define *comparison.* Compare the words *little* and *much.* Name two adjectives that do not admit of comparison; and give the reason.

2. What is an *abstract noun?* Write a compound sentence containing two abstract nouns in different clauses. What is a *collective noun?* Write two sentences containing each a collective noun, the one denoting *unity* and the other *plurality* of idea.

3. Write the principal parts of the verbs *burst, sit, set, lay, shoe.* What is a *participle?* How many kinds of participles are there? Name them.

4. In words, as fashions, the same rule will hold,
Alike fantastic if too new or old;
Be not the first by whom the new is tried,
Nor yet the last to lay the old aside.—*Pope.*

(*a*) What kind of a sentence is the above stanza? (*b*) Name the different clauses. (*c*) Name the subject and predicate of each clause. (*d*) State the kind of clause.

5. Parse *will hold, alike, new* (in the second line), *is tried* and *last.*

6. Parse *what* in each of the following lines:

We know *what* men we should honor.　He does *what* he pleases.

What !　Does he fancy himself a Cæsar ?

Normal College, 1890.　(2d paper.)

1. Convert the following into simple sentences: (*a*) He reported that the governor was dead.　(*b*) The scholars who were educated by him became distinguished.　(*c*) He told the troops that they must not fire on the enemy.

2. Define the word *invention.*　Correct the sentence: "The joy is great which arises from the invention of truth."　Define *vocation* and *avocation,* and construct a sentence containing both words correctly used.

3. Write a composition of not more than thirty and not less than twenty lines on ABRAHAM LINCOLN.　[You will be marked for *punctuation,* use of *capitals,* the right use of *words* and grammatical construction of sentences.]

4. Punctuate and capitalize the following:

Two Gentlemen of the Country Lindesay and Kirkpatrick friends of Bruce were then in attendance on him seeing him pale bloody and in much agitation they eagerly inquired what was the Matter I doubt said Bruce that I have slain the red comyn do you leave such a matter in doubt said Kirkpatrick I will make sicker that is I will make certain accordingly he and his companion Lindesay rushed into the church and made certain with a Vengeance.

Normal College, 1891.

1. Name five different kinds of nouns.

(*a*) In the sentence,

"Oh, how this spring of love resembleth
The uncertain glory of an April day,"

name the nouns and state the kind of each.

(*b*) What part of speech is *how?*   What does it modify?

(*c*) What is case?   Name the cases.

(*d*) In the sentence,

"The supplies having reached us the army began its march," name the nouns and state the kind and case of each.

2. Name four kinds of verbs in regard to their *form.*

(*a*) Name four kinds of verbs in regard to their *signification.*

(*b*) In the sentence,

"Home-keeping youths have ever homely wits," state what kind of a verb *have* is according to its *form* and also according to its *signification.*

(*c*) In the sentence,

"Beware of entering into a quarrel," parse *beware* and *entering.*

(*d*) In the sentence,

"He was laughed at," explain the verb in regard to its *signification.*

3. Write eight auxiliary verbs.

(*a*) Write the potential mood, pluperfect tense of the verb *to write.*

(*b*) What kind of a verb is *cleave?*   Write its principal parts.

(*c*) In the sentence,

"I can always buy such books as I want," parse *as.*

4. Name seven different kinds of clauses.

(*a*) Give an example of a subject clause.

(*b*) In the sentence,

"As I told thee before, I am subject to a tyrant, a sorcerer that by his cunning hath cheated me of the island," parse the words *thee, subject, that.*

(*c*) What kind of sentence is it?   Name each clause and its kind.

5. Write a noun clause in apposition to a noun used as subject of a sentence.

(*a*) Write a compound sentence consisting of two coordinate-clauses, each of which is complex with the dependent clause adjective in the first and adverbial in the second.

Normal College, 1891.   (2d paper.)

1. In five sentences introduce the following words: *Object, concord, dissent, involve,* and *prospect.*

2. By substitution of other prefixes change these words to their opposite meanings in five other sentences.

3. Explain the difference between *courage* and *bravery* in a compound sentence with two co-ordinate clauses, using the word *but* as the connective.

4. Write in three paragraphs of not less than six nor more than ten lines each what you consider the principal qualities of a good student, of a good teacher, and the main object of education.

5. Define paragraph. Name the punctuation points which may be made at the end of a sentence. When would you use a comma and when a semi-colon ? Construct a sentence in which you employ the comma, the semi-colon, the dash, and the period. Name all the kinds of words that are commenced with capital letters.

6. Write a letter to the Governor of the State of New York, requesting him to use his influence to establish civil service reform *in the appointment* of all teachers.

[The letter must not exceed fifteen lines. *Credit will be given for arrangement, punctuation, the right use of words, and the correct construction of sentences.* The mark for executive ability will be given on this letter.]

Normal College, 1892.

Time, 2 hours.

" My father loved Sir Rowland as his soul,
    And all the world was of my father's mind;
    Had I before known this young man his son
    I should have given him tears unto entreaties.
    Ere he should thus have ventured."
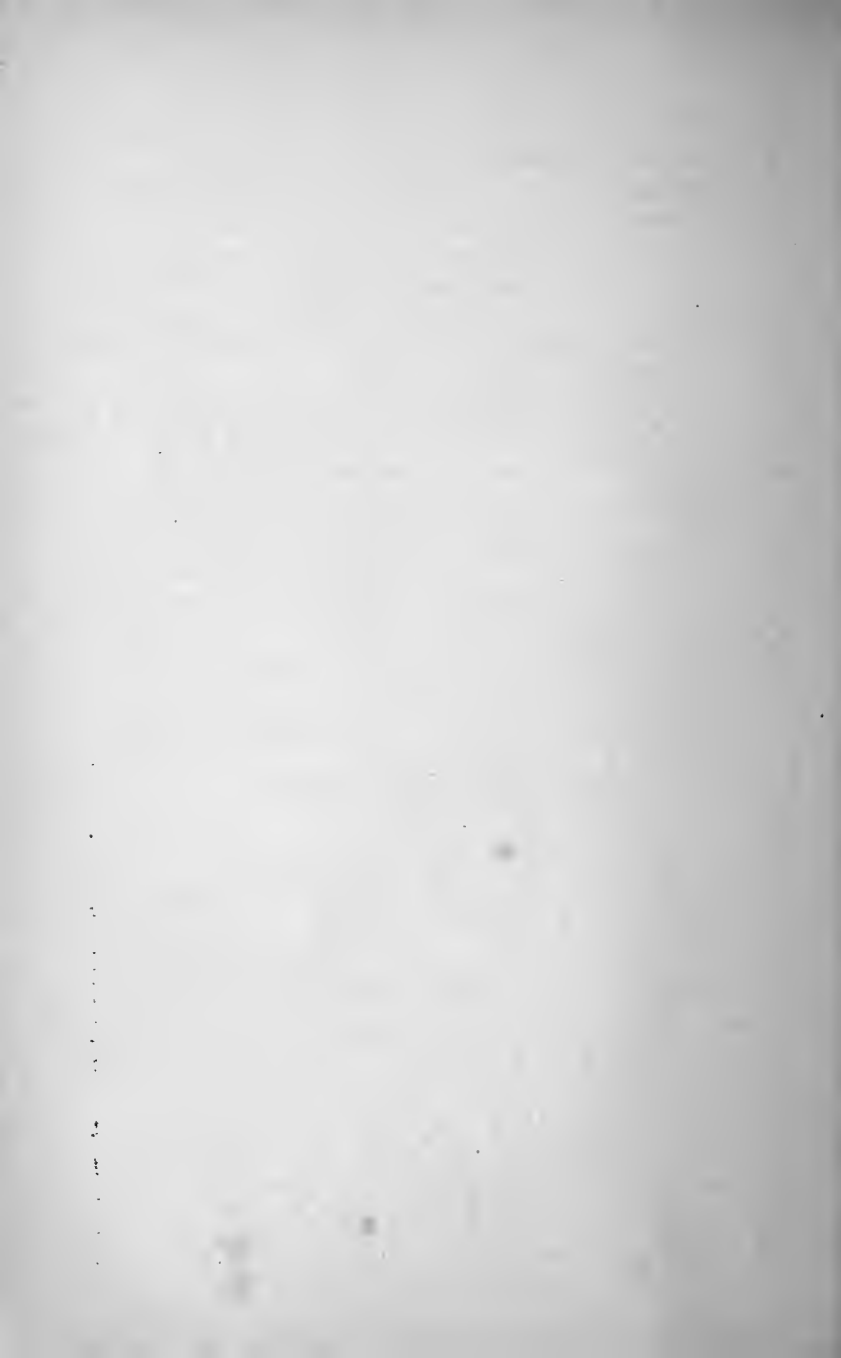
1. What kind of a sentence is the above quotation?

Name the first clause and state the kind of clause.

Name the second clause and state the kind of clause.

Name the third clause and state the kind of clause.

Name all the subjects and predicates from "My" to "ventured."

2. Parse *soul, all, son, before, ere*.   State the mood and tense of *ventured*.

3. Nobody else was just there: parse *else* and *just*.   Write sentences in which the word *but* is correctly used as a noun, as a conjunction, as a preposition, and as an adverb.

4. Construct a compound sentence with two co-ordinate clauses, the first being a complex and the second a compound clause.

Write a sentence containing an adverbial clause; a sentence containing an adjective clause.

5. Define *declension, conjugation, syntax, mood,* and *tense*.

Normal College, 1892.   (2d paper.)

Time, 2 hours.

1. Write a letter about the Normal College.   Where situated?   What kind of building?   Handsome, large, well-lighted, cheerful?   How you reach it from your residence? Describe the room in which you are writing your examination.

[*Credit will be given for arrangement, proper division into paragraphs, punctuation, right use of words, and capitals and correct construction of sentences.*]

2. What is the meaning of anti-slavery?   Give the word which is the opposite of anti-slavery, and use both words in a single sentence.   Give another word beginning with anti. Define antecedent and state how the word is used in grammar.

3. Define accede, intercede, proceed, recede, and supersede, and construct sentences containing each word.

4. What is the most important word in a sentence? Define subject, predicate, and object. By what arrangement of words is clearness of expression most readily secured?

5. Punctuate and capitalize the following:

The autograph album prepared by a committee of the press club for exhibition and sale at the actors fund fair is richly bound with gold trimmed covers and a quaint illustrated title page exclusive of cartoon illustrations by well known artists the book contains sixty pages each bearing a sentiment respecting the stage personally inscribed by some american celebrity in journalism or general literature.

William D. howells contributes a quatrain as follows

The wit supreme and sovereign sage
has told us all the worlds a stage
The curtain on his scene up-furled
shows us the stage is all the world.

GEOGRAPHY.

College of the City of New York, 1888.

1. (*a*) Sketch an outline map of the United States, omitting Alaska.

(*b*) Locate on this map the following ranges of mountains: Blue, Cumberland, Coast Range, Sierra Nevada, Cascade.

(*c*) Locate on the same map the following rivers and lakes: Missouri, Mississippi, Hudson, Lake Michigan, Lake Erie.

(*d*) Locate on the same map the following cities: Boston, Chicago, New Orleans, San Francisco, Galveston, Philadelphia, Buffalo, St. Louis, Washington, Charleston.

2. From what State or States do we obtain silver, copper, gold, mercury, petroleum, salt, sugar, cotton, rice, wheat?

3. Through what waters and near what countries would you pass, in the most direct course, (*a*) from New York to Odessa? (*b*) from San Francisco to Calcutta?

4. (*a*) What is the highest portion of the continent of Asia?

(*b*) What is the most northerly portion of the mainland of Europe?

(*c*) Which is the larger, the Caspian Sea or Lake Superior?

(*d*) Does the Volga feed or drain the Caspian Sea?

(*e*) What mountain ranges or elevations of land determine the general directions of the rivers of North America?

5. (*a*) What is the size and form of the earth?

(*b*) What is physical geography?

(*c*) What is meant by longitude?

(*d*) What is the latitude of New York City?

(*e*) Explain the phenomena of day and night.

College of the City of New York, 1889.

1. How high is the highest mountain on the earth? What is the diameter of the earth in miles?

2. Through what two points on the earth's surface do all meridians pass? Borneo and Iceland each extending over ten degrees of longitude, which is the longer in miles?

3. Which State borders on four of the five great lakes? Which two other States border each on two lakes?

4. Where are the following European cities (give country, part of country, river or sea in and on which each lies): Antwerp, Belfast, Copenhagen, Malaga, Palermo, Rouen, Warsaw, Zurich?

5. Name the European countries of which Algeria, the Azores, Ceylon, Egypt, Greenland, Java, Porto Rico, Victoria are severally dependencies?

6. How would you go, eastward, from Vera Cruz to the Philippine Islands? Through what waters and by what islands would you pass?

7. Where are the following South American cities: Bahia, Bogota, Callao, Cayenne, Maracaybo, Quito, Rio Janeiro, Valparaiso?

8. Where are these capes severally: Hatteras, Land's End, Race, St. Roque?

9. Where are Anam, Bokhara, the Congo Free State, Corea, Manitoba, Morocco, the Orange Free State, Servia?

10. Draw a map showing the course of the Mississippi from its source to its mouth. Indicate its junction with its principal tributaries; mark off the States on both banks and name them, and locate the capitals of these States.

College of the City of New York, 1890.

1. Draw a sketch map of the United States without State boundaries.

2. Locate thereon the sugar, cotton, tobacco, corn, wheat, and lumber belts, and the cities of San Francisco, Denver,

3

Kansas City, St. Louis, Chicago, Duluth, Portland, Me., Baltimore, Charleston, New Orleans.

3. What is the most direct route from Edinburgh to Bombay? Mention, in order, the countries and the waters traversed, and the ports at which the traveller lands or embarks.

4. What European peninsula projects northward from the continent? What Asiatic peninsula westward? Name two peninsulas in North America, two or three in Europe, three or four in Asia, which project southward.

5. Name the two largest countries in South America; the two smallest. Which South American country has the longest coast line, absolutely? Which the longest relatively to its area?

6. The cities of Belgrade, Berlin, Leipsic, Stuttgart, Verona, and Warsaw are at nearly the same distance from Vienna. Draw a circle, put Vienna at the centre, and locate the six cities on the circumference. Draw another circle, place Berne at the centre, and Cologne, Leghorn, Marseilles, Paris, and Venice on the circumference.

7. Draw the Mississippi and its branches, and give the approximate location of each State thereon.

8. What are air and ocean currents? How caused? State the name, location, and general direction of the most important ones; their influence upon the climate of continents.

9. Where is Queenstown? Through what channel, what sea, and to the mouth of what river does the steamer sail in continuing its trip from Queenstown to Liverpool? And in going from Liverpool to Glasgow, past what island, through what channel, up what firth and river?

10. Name and locate the five or six largest cities on the earth.

College of the City of New York, 1891.

1. How much of the earth's surface is water? On which side of the equator is most of the water? Name some of the largest lakes and the largest sheet of fresh water on the earth.

2. One-half of the land is divided among five powers: name them. Tell of each where its possessions lie.

3. Name the sea between Africa and Europe, the sea between Africa and Arabia, the channel between Africa and Madagascar, the large gulf which indents the western coast of Africa. In what part of Africa is Abyssinia? Cape Colony? Egypt? Liberia? Morocco? the Congo Free State?

4. What mountains must one cross in going from Virginia to Kentucky? from Dakota to Oregon? from the Argentine Republic to Chili? from Spain to France? from Hindostan to China?

5. In what European country is Antwerp? Athens? Bristol? Leipzig? Luzerne? Marseilles? Moscow? Naples? Seville? Utrecht?

6. Draw a map of New England (fairly covering half the sheet of paper) showing the State borders; the Connecticut and the Merrimac; Lake Champlain and Narragansett Bay; Boston, Burlington, Hartford, New Haven, Portland, and Providence. Write the names (in reasonable abbreviation).

7. What is the climate of California? What is the character of its vegetation? What are, therefore, the chief industries of the State?

8. Tell what you know of glaciers and of icebergs.

College of the City of New York, 1892.

1. What is the shape of the earth? What two constant motions has it? What do they cause?

2. Name the zones. What is the extent of each? What determines this extent?

3. Sketch a map of the State of New York (covering one-half the sheet of paper). Show and name the States and waters bordering on it, the rivers, mountains, valleys, islands, and cities.

4. What geographical advantages are possessed by the cities of New York, Boston, Chicago, and San Francisco?

5. Name the chief articles of commerce between the United States and France; Australia; China; Brazil; Malaysia.

6. In what European country and on what water is Havre; Lisbon; Messina; Copenhagen; St. Petersburg; London; The Hague; Hammerfest; Constantinople; Stockholm?

7. Through what waters and by what countries would you pass in sailing from San Francisco to New York, stopping on the way at Melbourne, Aden, and Liverpool?

8. Name the highest mountain and the longest river in North America; in South America; in Europe; in Asia; in Africa; in Australia.

9. What is a delta?   How is it formed?   Name and locate the great deltas.

10. Sketch a map of the British Islands.   Indicate the chief divisions of land and water represented thereon.

Normal College, June, 1888.

You may answer ten of the following questions—the first five and any five others which you may choose from the remaining fifteen.

1. New York is 71° west longitude and San Francisco about 122° west longitude.   If it is 9 o'clock A.M. in the former, what o'clock is it in the latter?

2. Give as near as you can the direction of the following cities from New York: *Mobile, Augusta, Montreal, Naples, Copenhagen, Melbourne, Montevideo, Calcutta, Teheran,* and *Odessa.*

3. Give the capitals of Greece, Switzerland, Egypt, Chili, Peru, Canada, Wisconsin, Georgia, Texas, Vermont.

4. Bound Pennsylvania.   Name its capital city; its largest city and five other cities of importance.

5. Name the States on each side of the Mississippi; those that border the great lakes; and those on the Pacific coast.

6. What is latitude?   What is the greatest longitude a place can have?

7. How can you tell with certainty the " true south ? "

8. What are the general productions of the temperate zone ? of the torrid zone ?

9. Why have great cities as a rule been built on the sea-coast or on rivers ? and what great invention of modern times will perform the duty formerly done by the great rivers ?

10. Why are elevated places cooler than those on the plain ?

11. Name four of the great railroad centres of the United States.

12. Bound France.   Name its capital and five of its important cities.

13. On what rivers are the following cities: Delhi, Berlin, Rome, Bagdad, Vienna ?

14. Where would you find Santa Fé, St. Augustine, St. Paul, Sacramento, and San José ?

15. Name five mountain ranges in Europe.

16. Name three capes on the coast of North Carolina.

17. Bound the State of Missouri. Name its capital and its largest city.

18. Name six of the great rivers of the United States; state where they rise and into what bodies of water they discharge themselves.

19. Through what waters would a vessel pass in going from Albany, N. Y., to Hartford, Ct. ?   Name five cities she would pass by.

20. A city is 10° 30' due north of another city.   How many geographical miles are they apart ?

Normal College, 1889.

Time, 2 hours.

1. How many degrees from the Equator to the Tropic of Cancer?   What is the width of the North Temperate Zone ? What is the latitude of New York ?   Name three important cities in Europe having nearly the same latitude.

2. From what countries does the United States import coffee? wines? sugar? State in general the chief productions of the northwestern States; the chief exports of the United States. What made New York State the greatest of the United States, and New York City the centre of commerce in the Western World? To what distinguished governor is New York indebted for its greatness?

3. Locate the following cities: *Denver, Santa Fé, Milwaukee, Louisville,* and *Toledo.* Name the States that touch the west side of the Mississippi.

4. Name the political divisions of South America and the capital of each. Locate the following cities: *Montevideo, Callao, Santiago, Pernambuco,* and *Caracas.*

5. Bound European Russia. Name its capital, three great rivers, and two mountain chains.

6. Through what waters would a vessel sail in going from Odessa to Riga with a cargo of wheat?

7. What waters separate Great Britain from Ireland? Name the four largest cities in Great Britain. State in round numbers the population of London.

8. What seas touch the east coast of Asia? Name three great cities of Hindostan. What is the capital of Beloochistan?

9. Bound Africa. What channel between Madagascar and the continent of Africa? Through what waters would a ship sail in going from London to Calcutta by the shortest route?

10. Locate the following cities: *Melbourne, Sydney,* and *Hobarttown.*

Normal College, 1890.

1. What is a meridian? What is the first meridian? How many meridians are usually drawn on a terrestrial globe? and why? How many degrees are equal to one hour of time?

2. The meridian of Alexandria (in Egypt) is 30° east and of New Orleans 90° west. On March 21st the sun rises at 6 o'clock in Alexandria, what is the time then at New Orleans?

3. Bound Manhattan Island. In what direction are the following places from New York City: *Newark, Páterson, Long Island City, Manhattan Beach, Staten Island, Yonkers, Flushing, Trenton, Long Branch,* and *New Haven?*

4. Name the four new States recently admitted into the Union. Bound Montana and state its capital.

5. Locate the following cities: *Paramaribo, Quito, Callao, Santiago, Bahia, Montevideo, Buenos Ayres, Aspinwall, Caracas,* and *Asuncion.*

6. Bound Great Britain. Locate the following cities: *London, Manchester, Liverpool, Glasgow, Edinburgh.* What is the most northerly point of Scotland? The most southerly point of England?

7. Name six mountain chains in Europe, and tell where they are situated. Name five islands in the Mediterranean in the order of their size.

8. Bound Afghanistan. Name two of its principal cities. What island south of British India?

9. Through what waters would a ship pass in sailing from Liverpool to Calcutta by the shortest route?

10. Name the divisions of Australia. Bound New South Wales and name its capital.

Normal College, 1891.

1. What is the greatest latitude that any place can have? Where has a place no latitude? What is the greatest longitude a place can have? Name the southern boundary of the Torrid Zone. Mention two things that determine climate.

2. Bound the State of New York.
   Name five of its cities as near as you can in the order of their size.
   What is the largest city on Long Island?
   Locate Sag Harbor, Geneva, Oswego, Elmira, and Utica.
   State as near as you can in round numbers the population of New York City, and also of New York State.

3. Name the capitals of West Virginia, South Dakota, Texas, Iowa, and North Carolina.

Name five rivers of the United States that empty themselves into the Atlantic Ocean.

Mention two great railroad lines by which you could travel from New York to Buffalo.

4. Bound Great Britain.

Write the capitals of England, Scotland, and Ireland, and the rivers on which they are situated.

Locate Liverpool, Bristol, Glasgow, Belfast, and Oxford.

Name four rivers of France.

Locate the following islands: Corfu, Elba, and Jersey.

5. Locate the following cities of Asia: Bombay, Lassa, Ispahan, Mecca, Smyrna, Madras, Nankin, Calcutta, and Singapore.

Name three great rivers of Asia that empty themselves into the Arctic Ocean.

Locate the following cities of South America: Buenos Ayres, Bahia, and Lima.

Normal College, 1892.

Time, 2 hours.

1. (*a*) Write the cause of the change of the seasons.

(*b*) How many degrees from the North Pole to the Tropic of Capricorn?

(*c*) What is the length of a degree at the Equator in geographical miles? In statute miles?

2. (*a*) In what part of the world will you find the antipodes of New York?

(*b*) What State of the United States was once an independent republic?

(*c*) To what government is the Holy Land now subject?

3. (*a*) Name in order of size the five largest cities of the United States.

(*b*) Where is Harvard University, Yale College, Cornell University, Vassar College?

(*c*) Locate the following cities: Venice, Copenhagen, Dantzic, Odessa, Carthagena.

4. (*a*) Bound Behring Sea. What valuable article of commerce is obtained in that region?

(*b*) Where is the Bay of Fundy and for what is it noted?

(*c*) Name the principal products of Brazil and of the Argentine Confederation.

5. (*a*) Name two important islands belonging to the State of New York.

(*b*) What two large islands southeast of Asia are crossed by the Equator?

(*c*) Name ten seas bordering on Asia.

GEOMETRY.

College of the City of New York, 1888.

Time, 1½ hours.

1. Prove that if two triangles have one side and the two adjacent angles of the one equal to one side and the two adjacent angles of the other, each to each, the two triangles are equal in all respects.

2. Prove that if a straight line intersects two parallel lines the sum of the two interior angles on the same side of the intersecting line is equal to two right angles.

3. Show how to bisect a given angle.

Here the regular examination ends. If, however, any applicant has *not been taught* either of the above propositions, he will state that fact in writing and prove instead one or both of the following:

4. Prove that parallelograms on the same base and between the same parallels have equal areas.

5. Prove that the area of a trapezoid is equal to one-half the sum of its parallel sides multiplied by the perpendicular distance between them.

College of the City of New York, 1889.

Time, 1½ hours.

1. Prove that in every triangle the greater side has the greater angle opposite to it.

2. Prove that if a straight line intersect two other straight lines and makes the alternate angles equal, these two straight lines will be parallel.

3. Show how to draw a straight line which shall bisect a given angle.

Here the regular examination ends. If, however, any applicant has *not been taught* either of the above propositions, he will state that fact in writing and prove instead one or both of the following :

4. The diagonals of a parallelogram mutually bisect each other.

5. The square described on the hypothenuse of a right-angled triangle is equal to the sum of the squares described on the other two sides.

College of the City of New York, 1890.

1. If two triangles have two sides and the included angle of one equal to two sides and the included angle of the other, each to each, the two triangles are equal in all their parts.

2. If a straight line intersect two other straight lines, making the sum of the two interior angles on the same side of the intersecting line equal to two right angles, the two straight lines are parallel.

3. Show how from a given point without a line to draw a perpendicular to that line.

Here the regular examination ends. If, however, any applicant has *not been taught* either of the above propositions, he will state that fact in writing and prove instead one or both of the following :

4. If the opposite sides of a quadrilateral are equal, they are also parallel and the figure is a parallelogram.

5. The area of a trapezoid is measured by half the sum of its parallel sides multiplied by the perpendicular distance between them.

College of the City of New York, 1891.

Time, 1½ hours.

1. Prove that if two triangles have two sides and the included angle of one equal to two sides and the included angle of the other, each to each, the two triangles are identical in all their parts.

2. Prove that if a straight line meet two parallel straight lines the alternate angles will be equal.

3. Show how to erect a perpendicular to a line at a given point.

Here the regular examination ends. If, however, any applicant has *not been taught* either of the above propositions, he will state that fact in writing and prove instead one or both of the following :

4. If two straight lines intersect, the opposite or vertical angles will be equal.

5. If any quadrilateral have its opposite sides equal, the figure is a parallelogram.

College of the City of New York, 1892.

1. Prove that if two triangles have two angles and the included side of the one equal to two angles and the included side of the other, each to each, the two triangles are identical in all their parts.

2. Prove that if a straight line intersect two other straight lines, making the alternate angles equal, the two straight lines which are intersected will be parallel to each other.

3. Show how to bisect a given angle.

Here the regular examination ends. If, however, any applicant has *not been taught* either of the above propositions, he will state that fact in writing and prove instead one or both of the following :

4. If two triangles have three sides of the one equal to three sides of the other, each to each, the two triangles will be identical in all their parts.

5. The square described on the hypothenuse of any right-angled triangle is equal to the sum of the squares described on the other two sides.

Normal College, June, 1888.

1. Name the different kinds of triangles; five different kinds of quadrilaterals; define parallel lines; define a right angle.

2. Prove that if two triangles have the three sides of the one equal to the three sides of the other, each to each, the two triangles are equal and the equal angles are opposite the equal sides.

3. Prove that if the opposite sides of a quadrilateral are equal they are also parallel and the figure is a parallelogram.

4. Prove that parallelograms on the same base and between the same parallels are equivalent or equal in respect of area or surface.

5. The parallel sides of a trapezoid are respectively 100 yards and 75 yards and the perpendicular distance between them 50 yards ; what is the area of the figure ?

Normal College, 1889.

Time, 2 hours.

1. Name and define the two kinds of propositions in geometry.

Name and define the two parts of every theorem, and illustrate by means of some theorem that you have learned. When is one theorem said to be the converse of another? Write two theorems, one of which is the converse of the other.

2. Name and define the two kinds of demonstration. Write a theorem of which the indirect or the *reductio ad absurdum* method of proof is used, and give the method of proof without going into detail or giving reference.

3. From a given point without a given line to draw a perpendicular to that line.

4. If a straight line intersects two other straight lines, making the sum of the two interior angles on the same side of the intersecting line equal to two right angles, the two straight lines are parallel.

5. If the opposite sides of a quadrilateral are equal, they are also parallel and the figure is a parallelogram.

Normal College, 1890.

1. State Euclid's three postulates and define the term postulate.

2. Into what two parts is the enunciation of every proposition divided? What is a proposition? Explain the difference between a proposition and a problem. What do you mean by the converse of a proposition? Illustrate by an example.

3. Define a parallelogram. Name two parallelograms that are not rectangles and define each.

4. Prove that if a straight line intersect two parallel lines the sum of the two interior angles on the same side of the intersecting line is equal to two right angles. (Give the reasons for every step in the demonstration.)

5. Prove that the opposite sides and the opposite angles of a parallelogram are equal.

6. Prove that if the opposite sides of a quadrilateral are equal they are also parallel and the figure is a parallelogram.

7. Give the construction and proof of the following problem: To bisect a given angle.

Normal College, 1891.

Time, 1½ hours.

N.B.—In answering the 3d, 4th, and 5th questions use the diagrams on the paper accompanying these questions and the letters found on them. Redraw the diagrams on your papers, without any change of form or letters, but adding such lines as you need for proof.

1. To what class of figures do parallelograms belong? Name and define two other figures, not parallelograms, which belong to the same class. Name and define the two divisions of parallelograms, and name the equilateral figure of each division.

2. When is one theorem said to be the converse of another? Write the hypothesis and the conclusion of the first of the

two following theorems, and explain why the second theorem is not the converse of the first:

(*a*) If two sides and the included angle of one triangle are respectively equal to two sides and the included angle of another, the two triangles are equal in all their parts.

(*b*) If two angles and the included side of one triangle are respectively equal to two angles and the included side of another, the two triangles are equal in all their parts.

Write the converse of the following theorem:

If one side of a triangle is greater than a second, the angle opposite the first side is greater than that opposite the second. (No proof required.)

*3. In Fig. 1 on accompanying paper assume $S\,M$ to be parallel to $Q\,N$. Prove the triangle $O\,S\,N = \frac{1}{2}$ the parallelogram $O\,M$.

*4. Name the two interior angles between the parallel lines on the right-hand side of the secant $R\,T$ in Fig. 1, and prove them together equal to two right angles.

*5. In Fig. 2 assume the angle $M\,N\,O$ to be a right angle, $O\,Q$ and $O\,T$ to be squares, and $N\,P$ to be perpendicular to $S\,T$. Prove $O\,Q = O\,P$.

* Give references in all cases.

Fig. 1

Fig. 2
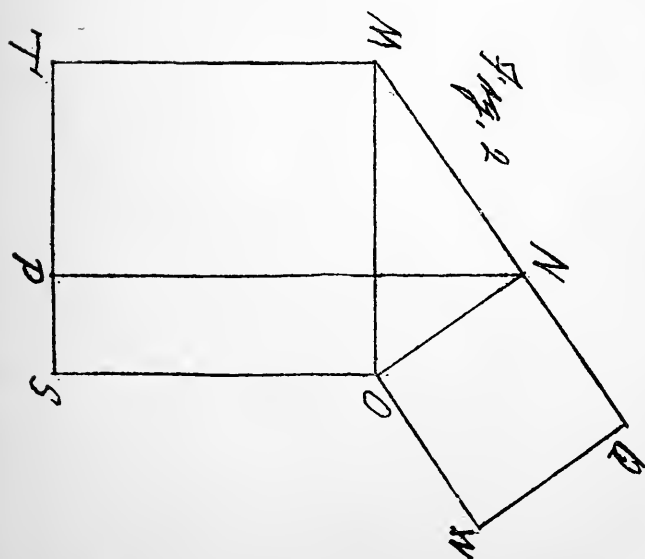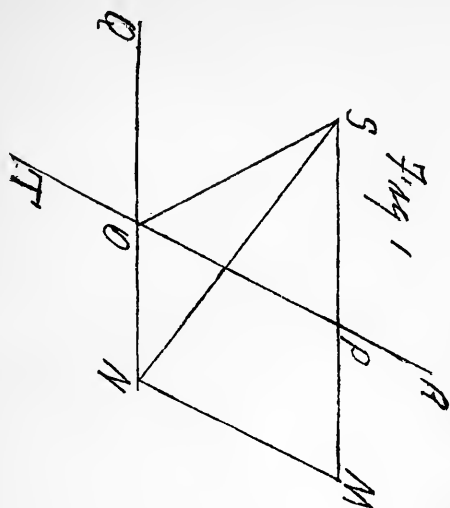
Normal College, 1892.

Time, 2 hours.

Each candidate must write at the head of her paper the name of the geometry which she has studied.

All candidates must answer the first three questions.

Those who have studied Hunter's Geometry or Euclid must also answer the *fourth* and *fifth* questions.

Those who have studied Wentworth's or Butler's Geometry must answer the *sixth* and *seventh* questions, in addition to the first three.

Those who have studied the Eclectic Geometry must answer the *eighth* and *ninth* questions, in addition to the first three.

Those who have studied no special geometry must answer the first five questions.

N.B.—In case the answers to the various parts of each question are not given together, the examiner will not be responsible for marking the omitted parts, unless distinct reference is made at the place of omission to the place where the omitted part is to be found.

1. Complete the following theorems and write the converse of each. (No demonstration is required.)

(*a*) If two straight lines intersect, the opposite vertical angles are, etc.

(*b*) If two straight lines meet a third at the same point and make the adjacent angles equal to, etc.

(*c*) If the two angles and the included side of one triangle are respectively equal to, etc.

(*d*) If from a point within a triangle two straight lines be drawn to the extremities of one side, the sum of the two lines, etc.

N.B.—For the remaining questions, redraw on your paper the diagrams referred to, each in its given form and position, and add such lines as you need for proof. Change no letters.

2. *Theorem.* If two triangles have two sides of one respectively equal to two sides of the other, and the included angle of the first greater than, etc.

Complete the theorem, assume the triangles to be placed as in Fig. 1 on the accompanying paper, and that $MO = MP$ and $PMN > OMN$. Prove $NP > NO$.

3. In Fig. 2 prove $RS + SQ < PR + PQ$. State the theorem.
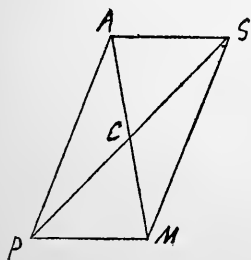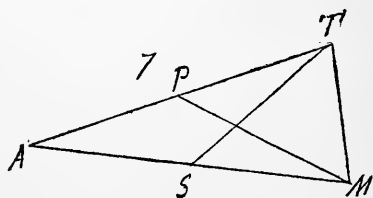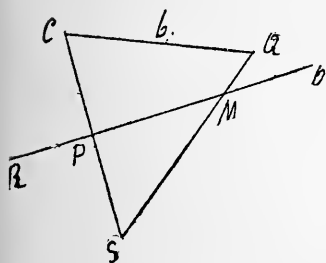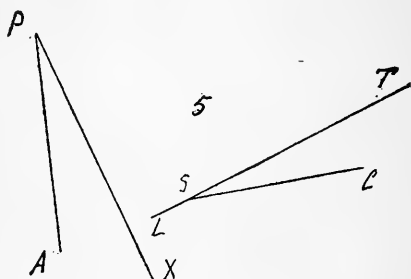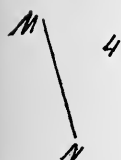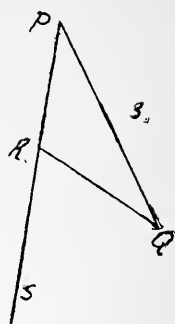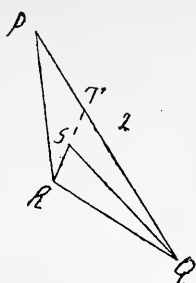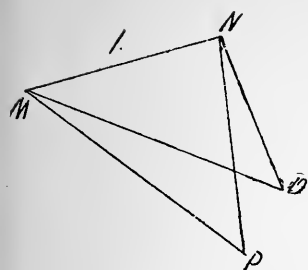
HUNTER AND EUCLID.

4. In Fig. 3 prove the angle $Q R S > P Q R$.   State the theorem.

5. From O in Fig. 4 draw a line equal to $M N$.   Give the construction and proof.

BUTLER AND WENTWORTH.

6. In Fig. 5 assume $S C$ perpendicular to $P A$ and $L T$ perpendicular to $P X$.   Prove $C S T = A P X$.   State the theorem.

7. In Fig. 6 assume P to be the middle point $C S$ and $O R$ to be perpendicular to $C S$.   Prove $S Q > C Q$.   State the theorem.

THE ECLECTIC GEOMETRY.

8. In Fig. 7 assume $A T = A M$, and S and P to be the middle points of $A M$ and $A T$.   Prove $S T = P M$.   State the theorem.

9. In Fig. 8 assume $A S P M$ to be a parallelogram. Prove $A C = C M$ and $P C = C S$.   State the theorem.
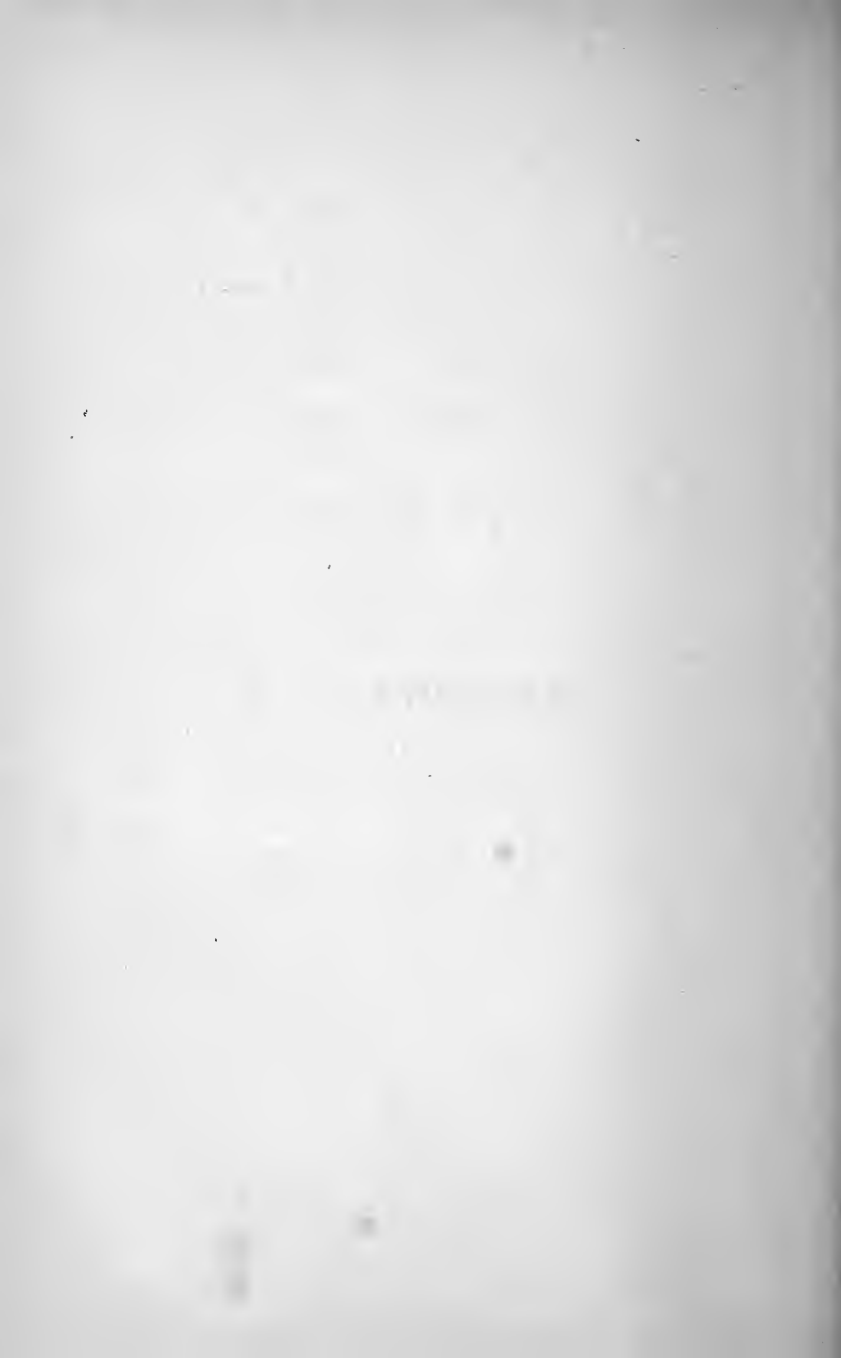
HISTORY.

College of the City of New York, 1888.

1. Give an account of the voyages of Columbus. Why was not the New World named after him?

2. State when, where, and why the "Pilgrim Fathers" settled in America.

3. Name the several wars, with dates, in which the colonists took part down to the Revolution. Which was most important and why?

4. Give the names of the thirteen colonies and group them according to their governments, charter, proprietary, etc. Were the people of the colonies alike in nationality, religion, or other respects? State the differences.

5. Describe the events of the Revolutionary War in the South in the year 1780. Full account.

6. What were the causes of the Mexican War? What part did General Scott take in it?

7. Valley Forge, Wyoming, Lookout Mountain, Appomatox, Tippecanoe, Carteret, Wayne, Seward, Burr, Meade. Why are these names of places and persons prominent in our history?

8. Name the Presidents of the United States, with dates, from Madison to Buchanan, inclusive. Give the principal events of Jackson's administration.

9. Give the Southern and Northern views of the secession question.

10. What is the Federal Constitution? Give a full history of its adoption; why, where, and when.

College of the City of New York, 1889.

1. Explain the origin of the names (*a*) "America," (*b*) "United States," (*c*) "New York," (*d*) "Georgia." State fully why they were applied and when.

2. Describe the colonists of Massachusetts, Pennsylvania, and Maryland, showing in what respects they differed from each other. Include a brief account of their first settlements.

3. Give a sketch of Queen Anne's war. Name the principal Indian wars since 1776, giving dates.

4. Show that the period from 1765 to 1775 was an important one in our history. Give the chief events in order.

5. How far did France assist us in the Revolutionary War? Who was Steuben? What services did General Greene render in the struggle?

6. Washington as President: state all you know respecting his administration, naming events, public measures, cabinet ministers, etc.

7. Who were Marquette, Stuyvesant, Irving, Morse, Warren, Andros, Webster, Seward, Fulton? Name six of our prominent naval heroes since 1775.

8. Give the substance of the amendments to the Constitution adopted since the Civil War. What other questions were settled by that war?

9. Give an account of the chief military operations of the year 1863. What bearing did they have on the result?

10. What is meant by the "Federal Union," and what tie holds it together? What form of government do we have in this State, and when was it adopted?

College of the City of New York, 1890.

1. Who were the earliest explorers of the Great Lakes and the Ohio and the Mississippi Rivers? Give names, dates, and some details. Also, what interesting relics or earthworks were found in that part of the country?

2. Give a brief account of the settlement of Rhode Island and New York. State, also, what occurred in New York between the years 1664 and 1674.

3. How did the French and Indian war differ, in its origin and results, from other colonial wars? Explain the final success of the English.

4. What were the causes of the Revolutionary War ? Name three American victories and three defeats occurring between 1776 and 1780.

5. What large tracts of territory were granted to or purchased by the United States before 1805 ? What tracts have been secured since then, and in what way ?

6. Name the Presidents who have served two terms, giving dates. Who was President during the 1812 war ? Who during the Mexican War ?

7. On what occasions did the slavery question greatly agitate the country ? Give full account of what took place in 1850.

8. State all that you know about Thomas Jefferson and Abraham Lincoln.

9. What questions were settled by the Civil War ? Give brief account of the closing military operations in 1865.

10. What is the present form of government in New York State, and when was it adopted ? Who were De Witt Clinton, William H. Seward, Millard Fillmore, S. F. B. Morse ?

College of the City of New York, 1891.

1. At the outbreak of our Revolutionary War what four different groups of European settlers were living in North America ? Locate them, and give the population of the largest group at the time.

2. What powers have had possession of New York City since its first settlement ? and explain when and why it passed from the control of one to another.

3. Name the three most important wars fought on this continent, and state the cause and result of the first one.

4. Give the history of the Stamp Act. What other acts of taxation did the colonists resist ?

5. The battles of Long Island and Trenton : describe each briefly and estimate their importance as Revolutionary events.

6. When and under what circumstances were Louisiana, California, and Florida acquired by the United States?

7. State concisely for what the following men have been distinguished in our history: Thomas MacDonough, Anthony Wayne, "Stonewall" Jackson, Aaron Burr, John C. Fremont, Wendell Phillips, Winfield Scott, Daniel Morgan, Daniel Webster, John Adams.

8. Why did the Southern States secede from the Union in 1860–61? What two great victories turned the tide of the war in favor of the North?

9. What led to the adoption of the Federal Constitution? When and where adopted, and what do you understand by it?

10. Name the Presidents who served two terms, giving dates. Who was President when John Brown was executed? Who when the first Atlantic cable was laid?

College of the City of New York, 1892.

1. Describe the voyages of Columbus, and give a brief sketch of his life.

2. Give the history of New Netherland under its last Dutch Governor. Who was the first American Governor of New York?

3. What was King Philip's war? Also, Queen Anne's war? Give main facts, dates, etc.

4. Why did the colonists refuse to pay a tax on tea? Follow events thereafter to the 19th of April, 1775.

5. Give an account of the campaign that ended in Burgoyne's surrender. Why was that event of special importance to the American cause?

6. What territory did the United States acquire in 1787? and how? When and how was Texas acquired?

7. Give the leading events of Madison's and Jackson's administrations.

8. Why did the Southern States secede in 1861? Why cannot slavery be revived?

9. Give an account of Lee's invasion of Pennsylvania in 1863. Name three great defeats the North sustained during the war.

10. Name the Presidents in order from Monroe to Grant. Under which one was Daniel Webster Secretary of State? Who was President when California was admitted into the Union?

Normal College, June, 1888.

There are five sets of questions, numbered respectively 1, 2, 3, 4, and 5. You can answer no more than two in any one set, and these two you may choose at pleasure. If you can answer ten (or two from each set) you will receive 100%; if nine, 90%, and so on.

1. (*a*) What great idea prompted the discovery of America?

(*b*) Give a brief account of the discovery of America by Columbus and of his subsequent voyages.

(*c*) Write a brief account of the voyages and discoveries of Cartier.

(*d*) What great Englishman attempted to found settlements in North America in 1583, '84, and '85? Name two of the navigators who sailed under his patronage.

(*e*) What part of North America was claimed by England, and why?

2. (*a*) Which one of the original thirteen States was first settled? When, where, and by whom was it settled? What was the character of the first settlers?

(*b*) What State was settled in 1614? By what people was it settled? How long did they hold possession of it?

(*c*) When and by whom was Massachusetts settled? Describe briefly the character of those people.

(*d*) Name two of the early Indian wars and state their causes.

(*e*) What was the cause of King William's war, and by what treaty was it terminated?

3. (*a*) What excuse did the English government make in 1764 for taxing the American colonies? What reason did the colonists assign for resisting taxation?

(b) Where and when did the Second Colonial Congress meet? Who was its president?

(c) Give the important events of 1776 as nearly as you can in chronological order.

(d) Give a brief sketch of Washington, stating when and where born, his education, first employment, military training, and at least three battles of the Revolution in which he figured in person.

(e) Name four distinguished statesmen of the Revolution.

4. (a) What great measure was passed by Congress in 1787? What influence had this measure on the growth of the country?

(b) What is the Federal Constitution? Who was the first President under this Constitution?

(c) What territories have the United States purchased at different times, and from whom?

(d) What "right" did Great Britain claim, which was the chief cause of the war of 1812–15?

(e) Name the Presidents in order from Washington to Cleveland, and name those who were re-elected.

5. (a) Who was President during the Mexican War? Why was a portion of the New England people sternly opposed to this war? Name three American generals who distinguished themselves in this war.

(b) What celebrated measures were passed by Congress in 1819–20 and 1850? How did the admission of Texas and the acquisition of new territory to the Pacific interfere with the celebrated act of 1819–20?

(c) What do you mean by a civil war? From your general reading, name some civil wars that took place in other countries. Why did the South take up arms against the Union? Why was the North bound to succeed in the long run? Who was commander-in-chief of all the land and naval forces of the United States from 1861 to 1865?

(d) What great fortification was captured by Grant in July, 1863? Who was the Confederate commander? Give a brief account of the capture of this stronghold.

(e) What two great generals were opposed to each other in the series of skirmishes and battles that immediately preceded the capture of Atlanta? Who superseded the Confederate commander at a critical moment? What American hero captured the city of Mobile?

Normal College, 1889.

Time, 1½ hours.

1. From what monarchs did Columbus beg in vain for aid to enable him to discover a passage to the East Indies? What sovereigns finally furnished him with an outfit? With how many vessels did he sail? With how many did he reach the West Indies, and with how many did he return?

2. Who were the Puritans? Why were they so called? When and where did they land in America? What States did they settle? What Indian wars occurred in New England? What form of government did the Puritans establish?

3. Who settled Virginia, North and South Carolina? What was the character of the first settlers? When was South Carolina first settled?

4. State the causes of the French and Indian war and of the Revolutionary War. State the most important event in the following years: 1759, 1763, 1775, 1776, 1777.

5. What great American was mainly instrumental in securing French aid and in forming the treaty of alliance with France? Name four distinguished Frenchmen who aided America in the Revolution.

6. What is the Constitution of the United States? What are the three great divisions of the government? Which division imposes taxes? Which enforces the laws?

7. What States were introduced into the Union between 1789 and 1800? What was the Missouri Compromise? Give its date.

8. What historical event is connected with each of the following names: Oliver H. Perry, Samuel F. B. Morse, De Witt Clinton, Mason and Slidell, and John Ericsson?

9. What States passed ordinances of secession after the general election of 1860?

10. What Union officer commanded the land forces at Antietam? at Gettysburg? at Atlanta? at Vicksburg? and the naval forces at Mobile?

Normal College, 1890.

1. How long did the Dutch hold New Amsterdam? In whose reign was it captured by the English? Who was the English military officer who captured it? Who had the better right to the territory, the Dutch or the English? State the reasons.

2. Describe the Conway Cabal. What was the most important battle of the Revolution? Why? Who were the respective commanders? Name the members of the committee who drafted the Declaration of Independence. What important military event virtually ended the Revolutionary War?

3. Name the three great departments of the United States government. Who is the chief officer of the national government? Who is the chief officer of the State government? Who is the chief officer of the city government? Who is the commander-in-chief of all the military and naval forces of the United States? State how a President of the United States is elected.

4. When and by whom were slaves introduced into the colony of Virginia? What celebrated act was passed by Congress in 1787? And what effect had it on the slavery question? When was the Compromise Bill passed? Explain this bill.

5. By what act was the Confederate war commenced? By what battle was it ended? Who was the great Secretary

of the Treasury during this war ?   Name five battles in which General Grant was the chief commander.   In which of these did he capture whole armies ?   What two Presidents were assassinated ?   What two died in office ?

Normal College, 1891.

1. Who discovered and explored the St. Lawrence River ? Who discovered the Mississippi River ?   Who subsequently explored it ?   What two nations claimed the valleys of the Ohio and the Mississippi ?   State the claim of each.   What was the result of the French and Indian war ?   What English general captured the citadel of Louisburg ?

2. Describe briefly the route of Burgoyne in his invasion of New York.   What battles were fought ?   Who was the American commander ?   What American officers distinguished themselves in this campaign ?   What great American was chiefly instrumental in forming treaties of alliance with France and other European countries ?

3. Give a brief explanation of the government of the United States, stating, first, the form of government; second, the three great departments of the government; third, the powers and duties of each department; and fourth, the principal officer in each department.

4. Who was President during the war of 181 –15 ?   Who gained the great naval victory on Lake Erie ?   Who was President when the Missouri Compromise Bill was passed ? Explain this bill.   Who was President during the Mexican War ?   What territory was acquired at the end of this war ?

5. There were two great victories gained in July, 1863: name them.   Who commanded the Union army in the East —who in the West ?   What three important cities did Sherman capture in his celebrated march to the sea ?   What was the grand result of the great Civil War ?

Normal College, 1892.

Time, 2 hours.

1. (*a*) By what people was America discovered prior to Columbus, and what part of the American continent did they touch ?

(*b*) Relate the history of Hudson and his voyages.

(*c*) When and where was the first English settlement made in America ?

2. (*a*) Name the three wars prior to the French and Indian war caused by troubles in Europe.

(*b*) Write a brief account of the Salem witchcraft.

(*c*) What languages were spoken in New York in the latter part of the seventeenth century ?

3. (*a*) What action did the Continental Congress of 1774 take, and what action was taken by the second Continental Congress in 1775 ?

(*b*) Give a brief account of the battle of Long Island.

(*c*) What great naval victory was gained by Paul Jones ?

(*d*) Name five noted statesmen of the Revolutionary period.

(*e*) Name the captors of Major André and state how they were rewarded.

4. (*a*) Where was the seat of government when Washington was inaugurated ?

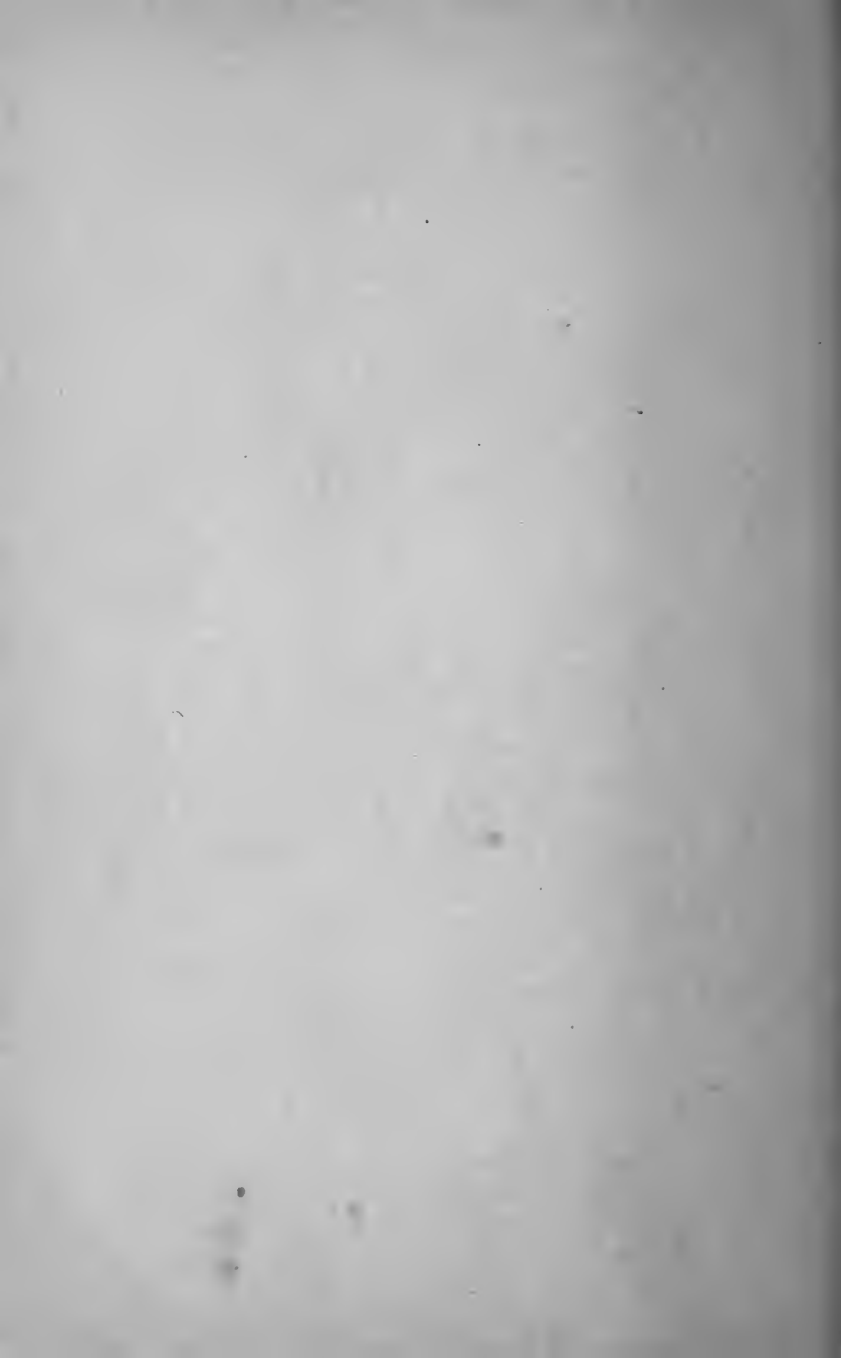(*b*) What is meant by the so-called "era of good feeling" and who was President at the time ?

(*c*) Write a short sketch of Mr. Lincoln's life previous to his becoming President.

5. (*a*) Name the States that seceded in 1861.

(*b*) In what city was the Confederate government first established and to what city was it subsequently removed ?

(*c*) Give a brief account of the battle of Gettysburg.

SPELLING.

College of the City of New York, 1888.

Capacity is an *absolute necessity* of *naval command*, as the fate of the Spanish Armada *signally* showed, and the most *patrician communities* have one by one been *compelled* to *yield* up the *claims* of rank and *descent* in the command of the sea. It is the *arena* where new men can rise to power, and among the Vikings were men who felt this and rose *accordingly*. Hence the *difficulty* of *identifying* the *greatest* among them in that ninth *century*, when they were in the midst of the *destructive* work that *preceded settlement* and *occupancy*.

An attack of ague.	An arbitrary decision.
The skilful artisan.	A prolific brain.
Anxious thoughts.	Triumphant shouts.
Individual peculiarities.	Wholesome correction.
A disastrous engagement.	A handsome legacy.
Lincoln.	Idaho.
Bismarck.	Amherst.
Teneriffe.	Boulogne.
Sumatra.	Hebrides.

College of the City of New York, 1889.

The queen is upon terms of the greatest *cordiality* with Lord Melbourne, and very *naturally*. Everything is new and *delightful* to her. She is *surrounded* with the most *exciting* and *interesting enjoyments;* her *occupations*, her *pleasures*, her *business*, her *court*, all present an *unceasing* round of *gratifications*. With all her *prudence* and *discretion* she has

great animal spirits, and enters into the *magnificent novelties* of her *position* with the *zest* and *curiosity* of a child.

Bachelor.	Electrotype.	Amuse.
Deceit.	Foreign.	Answer.
Decrease.	Centennial.	Dakota.
Appetite.	Doubtful.	Moscow.
Elephant.	Barometer.	Nicaragua.
Acre.	Calico.	Dardanelles.
Bullion.	Furious.	Paraguay.
Recitation.	Agreeable.	Jefferson.
Delicacy.	Cemetery.	Massachusetts.
Behavior.	Advice.	Pennsylvania.

College of the City of New York, 1890.

The mongoose is one of the *drollest* of animals, and he has no *fault* except *mischief* of a *personal* kind. But for *humorous surprises* he has *unequalled ingenuity.* If a *strange* lady entered, my mongoose *slipped* out of *sight,* crept up the hangings without a *rustle,* and when the lady was most *interested* in *explaining* her *business,* he *stretched* his long body and *introduced* a very cold nose *between* her *hair* and her *collar.*

Procession.	Seizure.	Synonymous.
Debtor.	Shriek.	Effervescent.
Address.	Professor.	Righteous.
Receipt.	Grievance.	Incessant.
Excitement.	Irritate.	Campaign.
Telegraphic.	Obey.	Emphasis.
Programme.	Criticism.	Scientific.
Wheelwright.	Acquit.	Exchange.
Bordeaux.	Rhode Island.	Raleigh.

College of the City of New York, 1891.

1. If the *jealousy* of the *Parliament* and of the *nation* made it *impossible* for the king to *maintain* a *formidable* standing army, no *similar impediment prevented* him from making England the first of *maritime* powers.   (Macaulay.)

2. For many days the *vessel* was *tossed* about and all on board were *filled* with *apprehensions,* and no little *indignation against* the *author* of their *calamities.* (Prescott.)

3. The second was an *inquiry* how it could be *rendered practicable* to *discuss political* matters in future—a *proceeding* now impossible, in *consequence* of the *perverseness* and *arrogance* of *certain functionaries,* and one which whenever *attempted* always led to the same *inevitable* result. (Motley.)

College of the City of New York, 1892.

The great *historic systems* of writing are of such *immense antiquity* that their history has to be explained to a great extent by the aid of *conjecture* and *analogy.* Hence the *rudimentary* forms of *picture* writing which we find among the less *cultured* races are of *considerable* interest and value, *inasmuch* as they throw light on the *earlier* stages of the *development* of *graphic* symbols. (Isaac Taylor.)

Austria at first *ostensibly favored* the *Poles.* The *Vienna* and *St. Petersbury Cabinets* were at that time far from *friendly.* Austria *suspected* and feared the *Russian* plots to excite *rebellion* in Turkey, which could not but be *prejudicial* to her interests. Russia, the foremost *advocate* of *passive* and slavish *obedience, scruples* not, when it *suits* her plans, to *foment* rebellion among her *neighbors. Bismarck* had *endeavored* to draw Austria on the side of Russia. The *treaty* with Russia before *mentioned* made the *question* a *European* one. (Dyer.)

Normal College, June, 1888.

The adoption of the Federal Constitution was another epoch in the life of Washington. Before the official forms of an election could be carried into operation a unanimous sentiment throughout the Union pronounced him the nation's

choice for the presidential chair. He looked forward to the possibility of his election with characteristic modesty and unfeigned reluctance, as his letters to his confidential friends bear witness. "It has no fascinating allurements for me," writes he to Lafayette. "Let those follow the pursuits of ambition who have a keener relish for them." In reply to a letter from Colonel Henry Lee, he wrote: "The event to which you allude may never happen. This consideration alone would supersede the expediency of announcing any definitive and irrevocable resolution."

At the frontier of Pennsylvania he was met by his former companion in arms, Mifflin, now Governor of the State, who with Judge Peters and a civil and military escort was waiting to receive him. Washington had hoped to be spared all military parade, but found it was not to be evaded. At Chester there were preparations for a public entrance into Philadelphia.

The ladies of Trenton had caused a triumphal arch to be erected. It was entwined with evergreens and laurels and bore the inscription, "The defender of the mothers will be the protector of the daughters." Never was ovation more graceful, touching, and sincere. His progress through New Jersey afforded a contrast to his weary marchings to and fro, harassed with doubts and perplexities in the time of the Revolution.

Normal College, 1889.

1. The marble *palace* of the *sovereign,* with its *arcades* and *corridors,* its *terraces* and courts, its lakes and groves and gardens, filled a *circuit* of ten miles; its wide expanse of roof, profusely wrought in gold, rested upon hundreds of *pillars* of pure gold cunningly adorned in *arabesque* of azure to heighten the native richness of the yellow metal.

2. The rage of the *Portuguese* and the admiration of the *Spaniards* were alike blind. Neither nation was aware that

the newly discovered land was inhabited by *savages*. The general impression prevailed that the *Bahama* Islands and the West Indies were only outlying portions of *Cathay*.

3. He *rode* to the *beach* on a *chestnut* horse which he *tied* to a branch of a *beech* tree.   He waited for the *tide* to rise and then with *oars* he *rowed* o'er the river.   He met a young *Dane* who would not *deign* to help him to load his boat with a *bale* of cotton.   A stranger said he would go *bail* for his wages.

Philip.	Canada.
Hannibal.	Jamaica.
Matthew.	Havana.
Benjamin.	Savannah.
Ephraim.	Missouri.

Normal College, 1890.

In a cabinet *council* it was determined to *supersede* the French *minister's diplomatic* functions, deprive him of the consequent *privileges* and arrest his person; a message to Congress was in *preparation* at this *critical* juncture, when dispatches came from *Gouverneur* Morris announcing the minister's recall. . . . The *partisans* of France were now in the *ascendant*.   It was scouted as *pusillanimous* any longer to hold terms with Great *Britain*. . . . The *populace* was *belligerent* and every means taken by the press and the democratic societies to exasperate this feeling.   Washington, however, was too morally brave to be *clamored* out of his wise moderation by such taunts and *inflammatory* appeals.

The school was built on a lonely *site*.
Satan can *cite* scripture.
The *ascent* of the mountain was difficult.
The lord of the *manor* was a *baron*.

Accessible.	Gypsy.	Dorothy.
Defensible.	Apostasy.	Cynthia.

Allotted.	Cannibal.	Eustace.
Arable.	Cavalier.	Cornelius.
Typical.	Holiday.	Bartholomew.
Oracle.	Prelate.	Malaga.
Caravan.	Colossal.	Philippine.
Orifice.	Zephyr.	Ararat.
Elicit.	Rescind.	Caracas.
Cemetery.	Pigeon.	Sicily.

Normal College, 1891.

The expedition which sailed from Halifax against Louisburg, under the command of Brigadier-General Amherst, consisted of twenty ships of the line, eighteen frigates, and an army of fourteen thousand men. After a siege of a few days the fortress was surrendered. At the same time Cape Breton fell into the hands of the British.

Colonel Bradstreet solicited and obtained permission to surprise and seize Fort Frontenac at the northwest outlet of Lake Ontario. With three thousand soldiers he moved with celerity, took the fort, and with it nine armed vessels, sixty cannon, sixteen mortars, and a great quantity of ammunition.

The campaign closed with honor to the colonies. Preparation was made for the greater achievements of 1759. A treaty of peace and friendship was made with the Indians inhabiting the lands between the Appalachian Mountains, the Alleghanies, and the lakes.

Absinthe.	Jocund.	Raillery.
Bacchanal.	Kangaroo.	Scythian.
Calcimine.	Labyrinth.	Taciturnity.
Daguerreotype.	Lorraine.	Utility.
Edible.	Maceration.	Vitriol.
Farinaceous.	Nutritious.	Thibet.
Gibbeting.	Ocular.	Galilee.
Hypnotize.	Pelican.	Edinburgh.
Immutable.	Quiescence.	Grenada.

Normal College, 1892.

Thomas Campbell.

To the suggestion and eloquent advocacy of this distinguished man the London University is said to have owed its origin.

"The Pleasures of Hope" is a splendid poem. Its polish is exquisite, its topics felicitously chosen, and its illustration natural and beautiful. He lifts you up to an exceedingly high mountain, and you see all nature in her loveliness, and man in the truth of his character, with hope irradiating, cheering and sustaining him in the numerous ills of life. "Gertrude of Wyoming" is preferred by some readers even to his "Pleasures of Hope." It is a sad tale, told with tenderness as well as genius. But if these had never been written, his songs would have given him claims as a first-rate poet.

Censure.	Incense.	Susceptible.
Defamation.	Hygiene.	Morrisania.
Degradation.	Homicide.	Abyssinia.
Irritate.	Heresy.	Christiana.
Irascible.	Galaxy.	Finisterre.
Inflammation.	Feudal.	Ryswick.
Illicit.	Sacrilegious.	

DRAWING.

College of the City of New York and Normal College, Different Years.

1. Draw a *spiral*, three convolutions.

2. An equilateral triangle, every side an oblique line of four inches.

3. A hexagon inscribed in an equilateral triangle.

4. A vase in simple outline, six inches in height.

5. From the solid a *right pyramid* on a book; a pyramid and cylinder; an hexagonal prism standing on its base; an octagonal prism standing on its base.

6. Draw an original design with a vertical border consisting of cordate leaves, not less than six inches long.

7. In a square of two and one-half inches inscribe an octagon.

8. Draw an example of a bisymmetrical historic ornament.

9. A trefoil, the sides of the triangle three inches each.

10. Draw two concentric squares, the inner square four inches and the outer five inches.

11. Draw one of the following solids: Octagonal prism, hexagonal prism, cylinder, cube, and pyramid, pyramid and plinth.

12. Draw a regular octagon, sides one inch.

13. Draw as an original design a conventional border of hastate or cordate leaves or both combined.

14. Draw a natural-lobed leaf and conventionalize it.

15. Draw a Moresque, Greek, or Egyptian ornament.

16. Draw in an equilateral triangle whose side is six inches an original design consisting of an ivy and an oak leaf.

17. Make an original design of a surface-covering, using two different units, the minimum size six inches square.

18. Make an original design for a circular border, minimum diameter five inches.

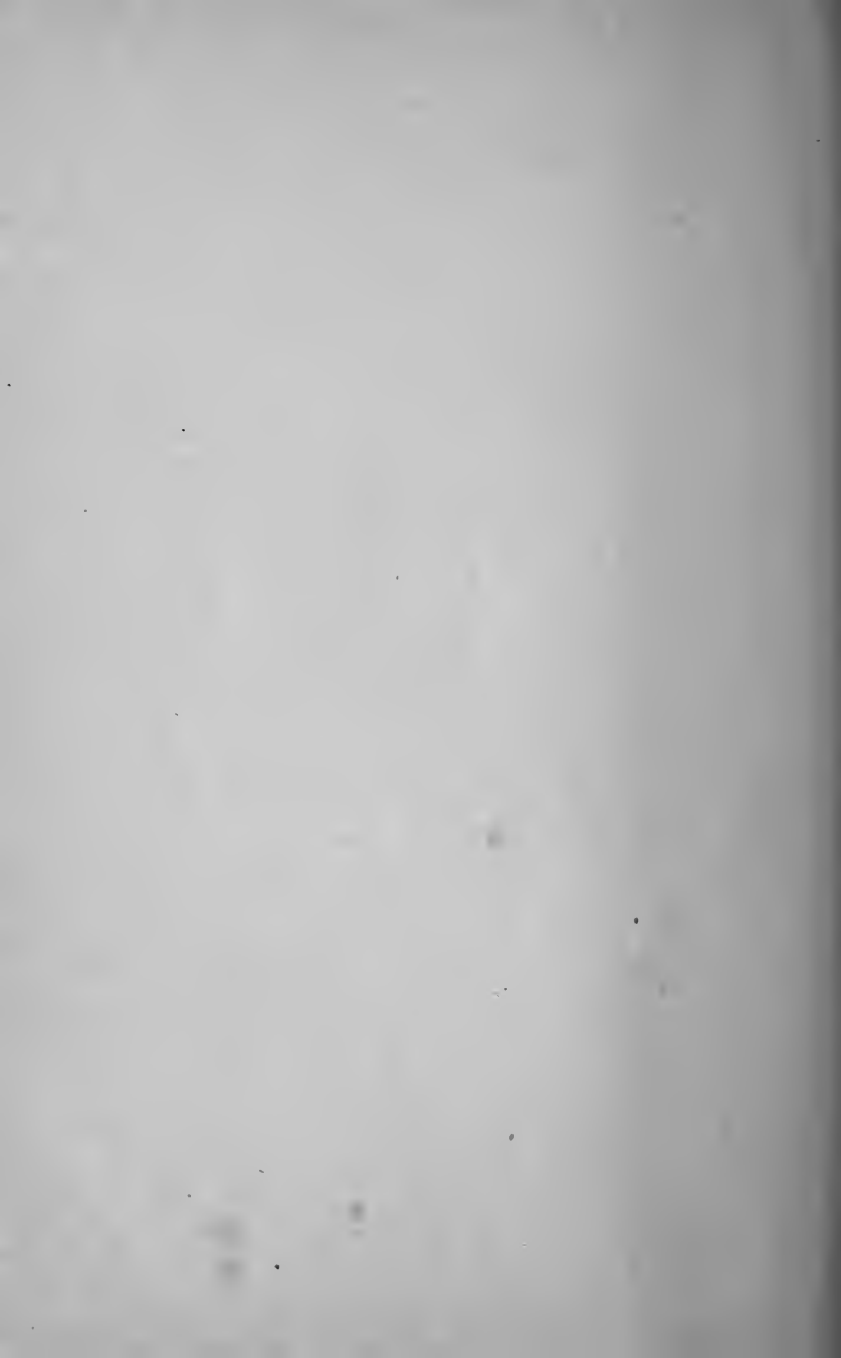**19.** Make an original design of flower-and-leaf ornament for octagonal space.

20. Draw one example of surface-covering consisting of the repetition of a geometric unit.

21. Draw the anthemion, its vertical axis five inches; the astragal, two units.